VOLUME 15 • DECEMBER 1960 • NUMBER XII

Journal of the AMERICAN MEDICAL WOMEN'S ASSOCIATION

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1. Bell, A.: Management of Constipation in the Puerperium. To be published.

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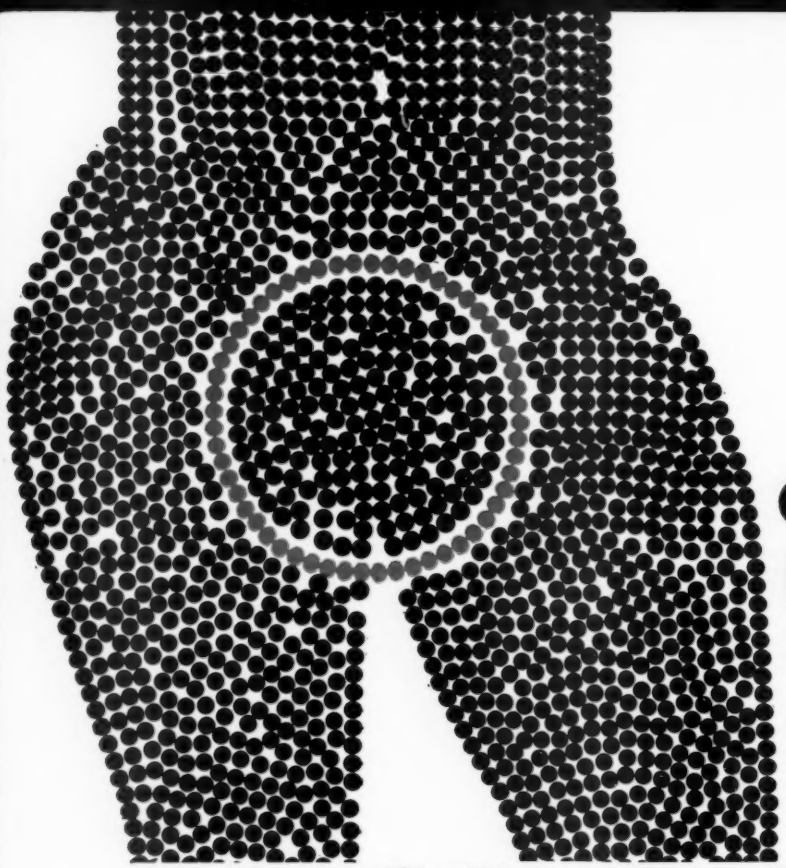

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References: 1. N. Mulla and J. J. McDonough, Ann. New York Acad. Sc., 82: (Art. 1), 182, 1959. 2. L. E. Savel, D. B. Gershenfeld, J. Finkel and P. Drucker, Ibid., p. 186.

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Volume 15 December, 1960 Number 12

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JOURNAL OF THE AMERICAN MEDICAL WOMEN'S ASSOCIATION is published monthly by the American Medical Women's Association, Inc., at 136 Fourth Ave. North, Nashville 3, Tenn. Entered as second class matter at the post office at Nashville, under the Act of Aug. 24, 1912. Acceptance for mailing at special rates of postage provided for in Section 1102, Act of Oct. 8, 1917, and authorized July 15, 1918.

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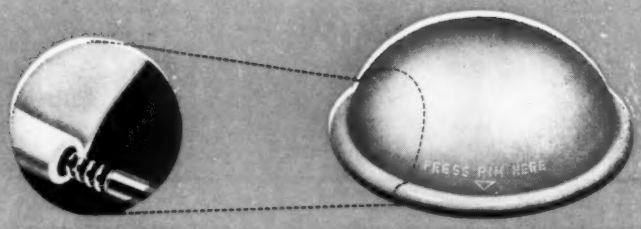

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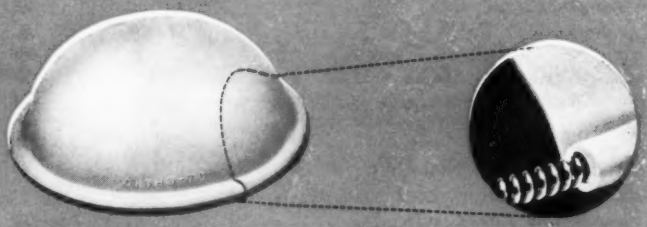

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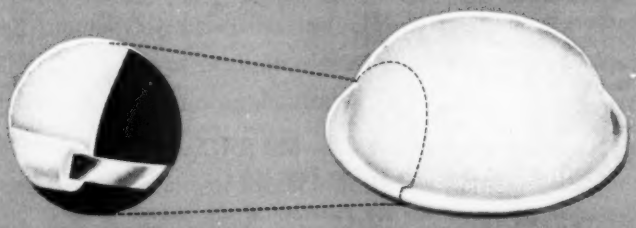

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The author[2] recommends that this therapy be continued for a minimum of five to six months if the pseudopregnancy is being effected to avoid operation. The side effect of nausea, which usually disappears within four or five days, may be diminished by starting with 5 mg. instead of 10 mg. of Enovid, by use of an antiemetic or by administering the drug with the evening meal or with milk or an antacid.

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Research in the Service of Medicine

1. Andrews, M. C.; Andrews, W. C., and Strauss, A. F.: Effects of Progestin-Induced Pseudopregnancy on Endometriosis: Clinical and Microscopic Studies, Am. J. Obst. & Gynec. 78:776 (Oct.) 1959.
2. Kistner, R. W.: Endometriosis and Infertility, Clin. Obst. & Gynec. 2:877 (Sept.) 1959.

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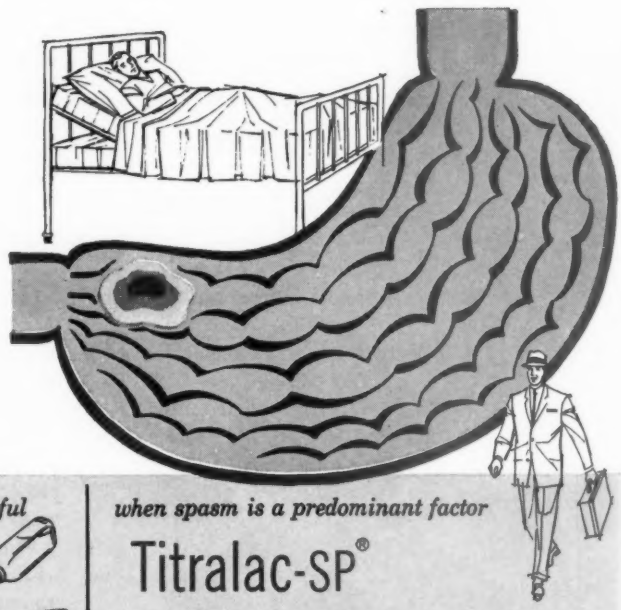

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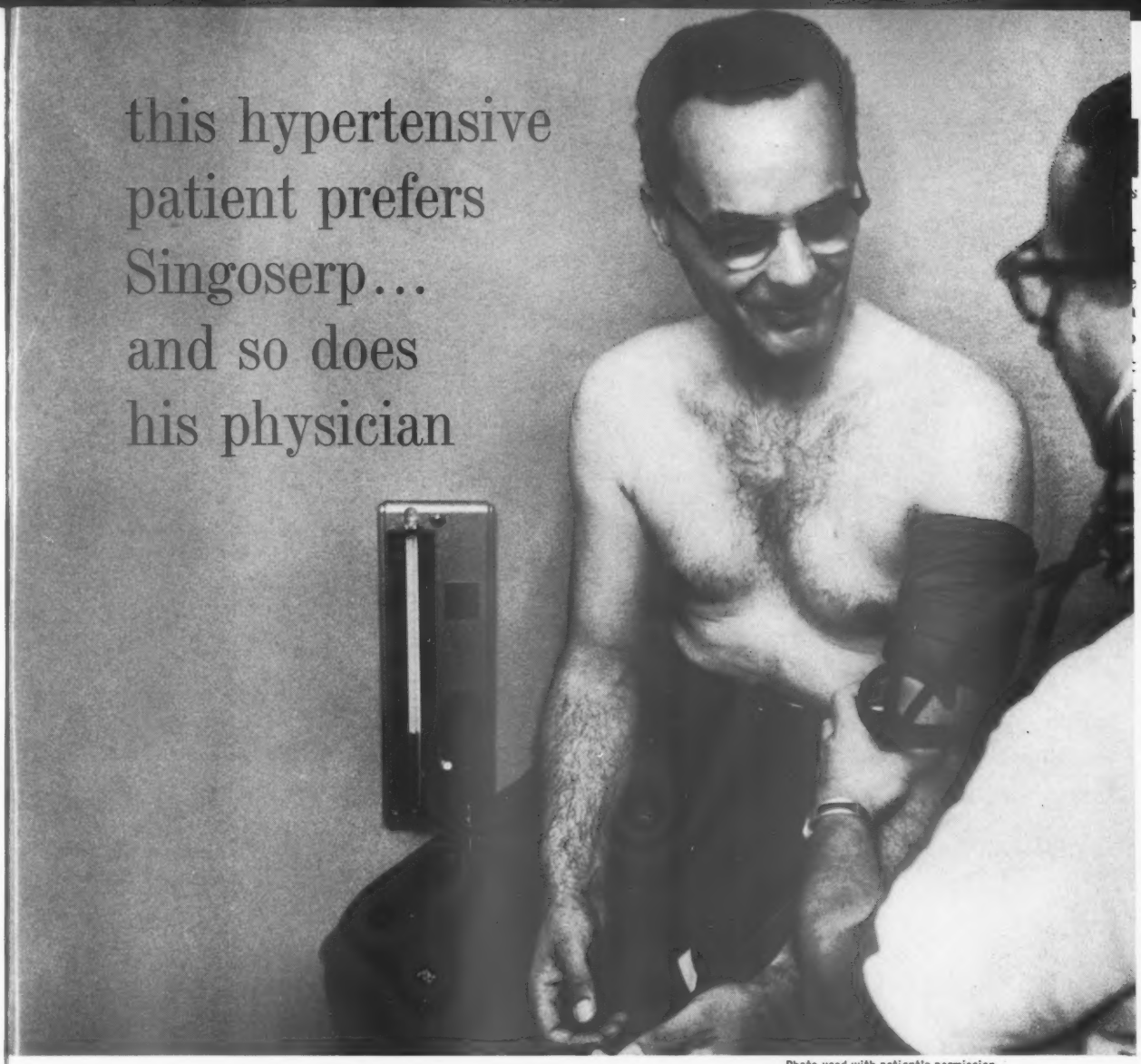

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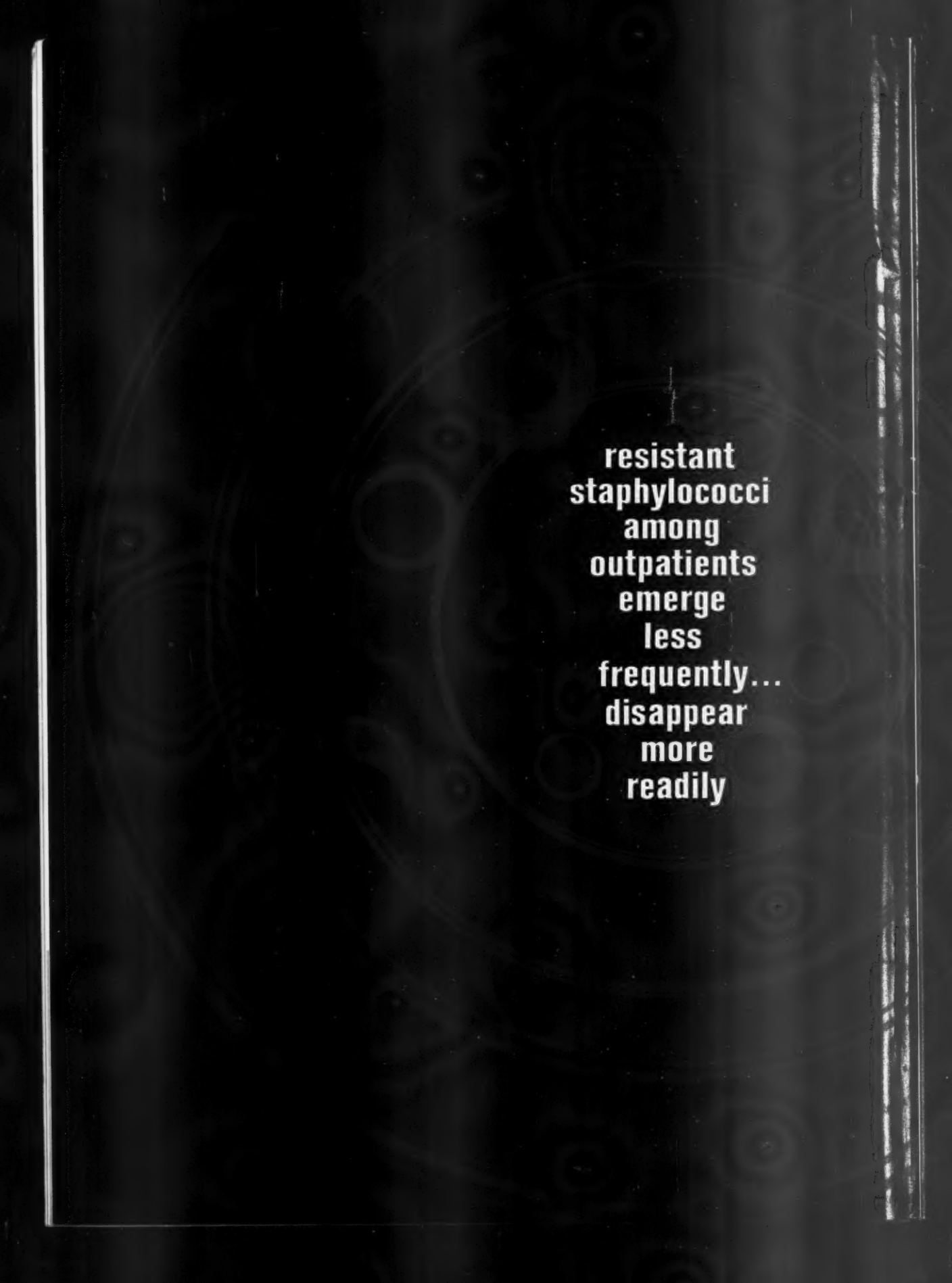
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References: (1) Bauer, A. W.; Perry, D. M., & Kirby, W. M. M.: *J.A.M.A.* 173:475, 1960. (2) Goslings, W. R. O., & Büchli, K.: *Arch. Int. Med.* 102:691, 1958. (3) Goodier, T. E. W., & Parry, W. R.: *Lancet* 1:356, 1959. (4) Fisher, M. W.: *Arch. Int. Med.* 105:413, 1960. (5) Petersdorf, R. G., *et al.*: *Arch. Int. Med.* 105:398, 1960. (6) Glas, W. W., in Symposium on Antibacterial Therapy, Michigan & Wayne County Acad. Gen. Pract., Detroit, September 12, 1959, p. 7. (7) Modarress, Y.; Ryan, R. J., & Francis, Sr. C. F.: *J. M. Soc. New Jersey* 57:168, 1960. (8) Rebhan, A. W., & Edwards, H. E.: *Canad. M. A. J.* 82:513, 1960.

IN VITRO SENSITIVITY OF COAGULASE-POSITIVE STAPHYLOCOCCI TO CHLOROMYCETIN FROM 1955 TO 1959*

These sensitivity tests were done by the disc method on 310 strains of coagulase-positive staphylococci. Strains were isolated from patients seen in the emergency room. It should be noted that among inpatients, resistant strains were considerably more prevalent.

*Adapted from Bauer, Perry, & Kirby[1]

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Widely useful for a variety of diagnostic and therapeutic purposes—even for your patients on sodium-restricted regimens.[3] Systemic absorption is negligible.[2,3]

Pediatric size, 2¼ fl.oz. *Regular size,* 4½ fl.oz. *100 cc. contains:* 16 Gm. sodium biphosphate and 6 Gm. sodium phosphate. *Also available:* Fleet Oil Retention Enema, 4¼-fl.oz. ready-to-use unit containing Mineral Oil U.S.P.

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1. Frech, H. C., and Lanier, L. R., Jr.: Am. J. Obst. & Gynec. 74:1146, 1957. 2. Way, W. G., et al.: Virginia M. Month. 85:291, 1958. 3. Hellman, L. D.: To be published.

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relaxes muscle tension
raises pain threshold

relieves the total pain experience

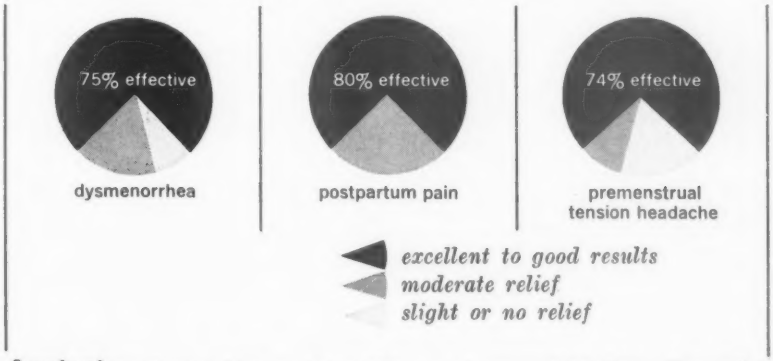
phenyramidol HCl

analexin®

a unique chemical molecule that is both a general non-narcotic analgesic and an effective muscle relaxant

Where pain makes tension and tension makes pain, Analexin relieves the total pain experience. The analgesic potency is equivalent to codeine, yet Analexin is not a narcotic nor is it narcotic related. It has proven to give profound relief in a wide variety of painful conditions without producing sedation or euphoria. Analexin is not habituating.[1-4] Tolerance or cumulative effects have not been noted. And "... in contrast to codeine and meperidine, the likelihood of untoward reactions ... is not high."[5] The infrequent occurrence of gastrointestinal irritation of a mild, insignificant type or of pruritus has been noted, but these effects subside promptly and do not limit therapy.[5]

"... excellent results ... in the treatment of dysmenorrhea, premenstrual tension headache, and postpartum pain."[6]



Analexin—Each tablet contains 200 mg. phenyramidol HCl. For relief of pain.

Analexin-AF—Each tablet contains 100 mg. phenyramidol HCl and 300 mg. aluminum aspirin. For relief of pain complicated by inflammation and/or fever.

1. Gray, A. P., *et al.*: Am. Chem. Soc. *81*:4347, 1959. 2. O'Dell, T. B.: Ann. New York Acad. Sc. *86*:191, 1960. 3. O'Dell, T. B., *et al.*: J. Pharmacol. & Exper. Therap. *128*:65, 1960. 4. O'Dell, T.B., *et al.*: Fed. Proc. *18*:1694, 1959. 5. Batterman, R. C., *et al.*: Am. J. Med. Sc. *238*:315, 1959. 6. Wainer, A. S.: Ann. New York Acad. Sc. *86*:250, 1960.

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(Continued on Page 1152)

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Journal
E PAPER
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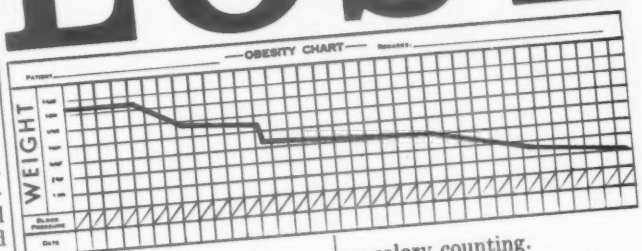

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Obedrin and the 60-10-70 Basic Plan succeed where other reducing regimens fail. The Obedrin Basic Plan provides three essentials for weight reduction:

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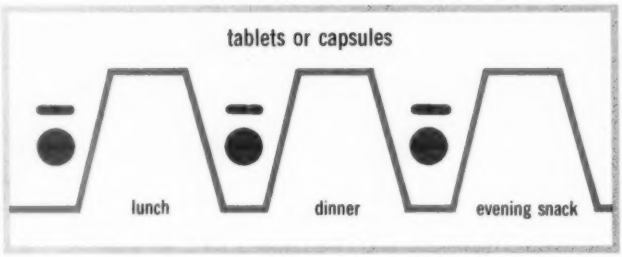
• Thiamine Mononitrate, 0.5 mg., Riboflavin, 1 mg., and Nicotinic Acid (Niacin), 5 mg., to supplement the diet

• Ascorbic Acid, 100 mg., to help mobilize tissue fluids

Obedrin and the 60-10-70 Basic Plan help the overweight patient establish correct eating habits... first, to lose excess pounds and then, more important, to *maintain* optimum weight.

Obedrin®
and the 60-10-70 Basic Plan
provide an effective weight-control regimen

A FLEXIBLE DOSAGE FORM PROVIDES DEPENDABLE CONTROL OF APPETITE



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A dependable anorexigenic agent
A flexible dosage form
Minimal central nervous stimulation
Vitamins to supplement the diet

Supplied: In bottles of 100, 500, and 1,000

Write for 60-10-70 Basic Plan menus and weight charts.

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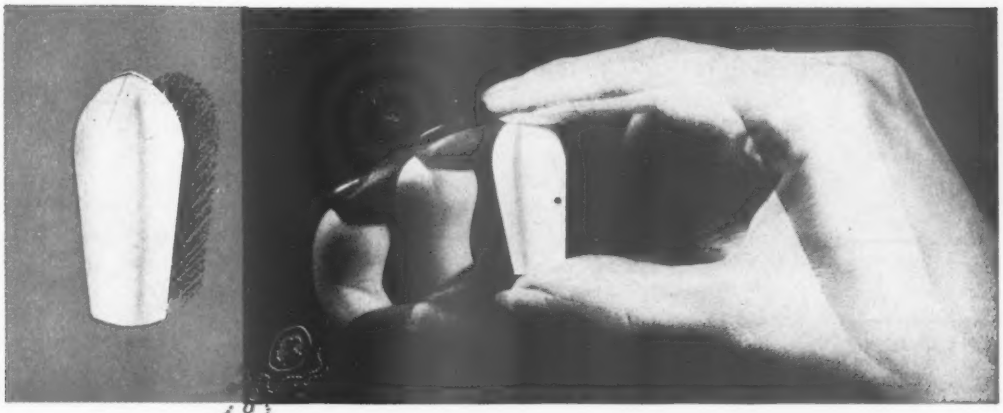

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Children like Tylenol—and parents are reassured when they see the prompt relief it brings. Tylenol is often prescribed with the antibiotics for this reason.

SUGGESTED DOSAGE: AT 4 TO 6 HOUR INTERVALS—
under 1 year, 60 mg.; 1-3 years, 60-120 mg.; 3-6 years, 120 mg.; over 6 years, 240 mg.

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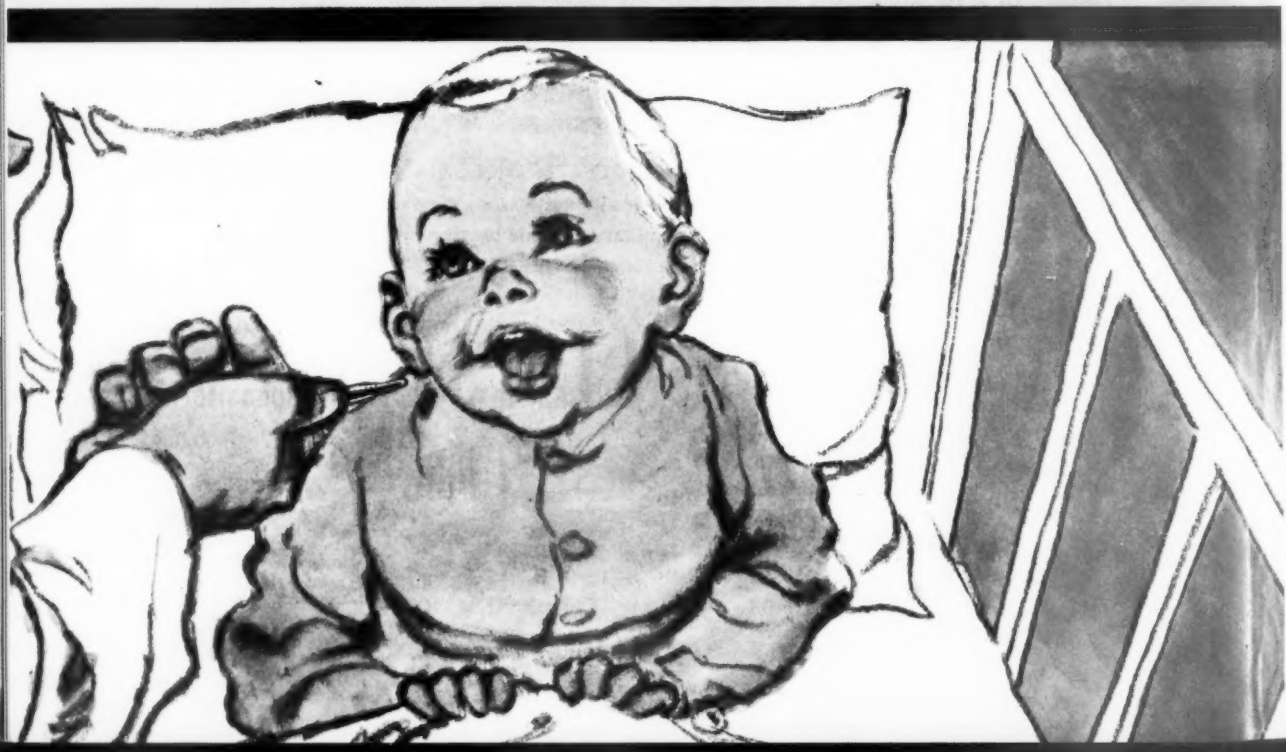
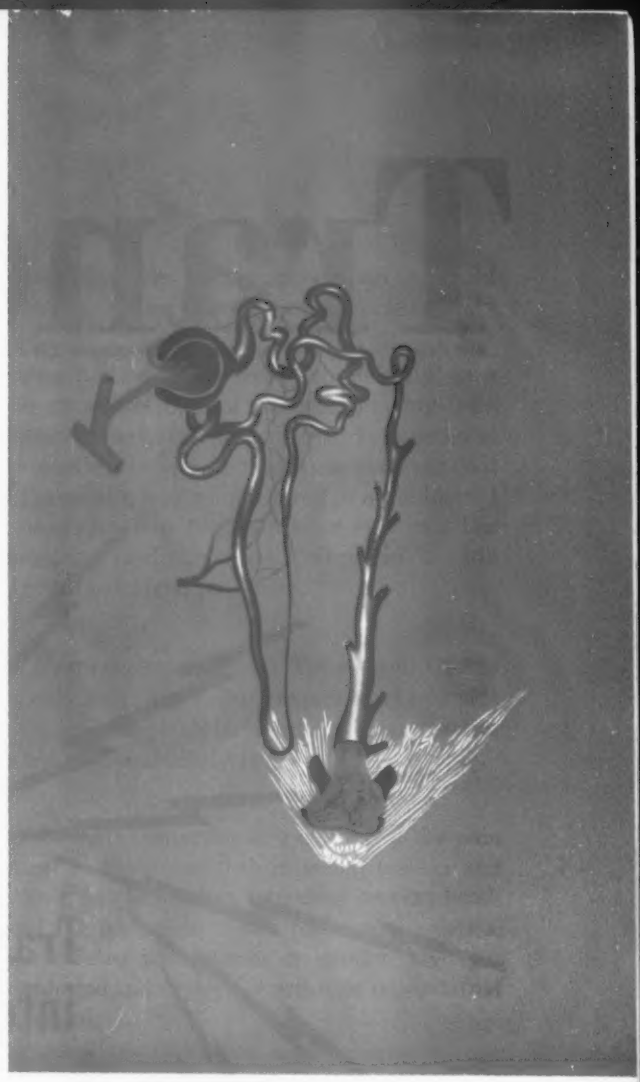
1. Cornely, D. A., and Ritter, J. A.: N-acetyl-p-aminophenol (Tylenol Elixir) as a Pediatric Antipyretic-Analgesic, J.A.M.A. *160*:1219 (Apr. 7) 1956.
2. Mintz, A. A.: Management of the Febrile Child, J. Ky. Acad. Gen. Pract. *5*:26 (Jan.) 1959.





on the pathogenesis of pyelonephritis:

"An inflammatory reaction here [renal papillae] may produce sudden rapid impairment of renal function. One duct of Bellini probably drains more than 5000 nephrons. It is easy to see why a small abscess or edema in this area may occlude a portion of the papilla or the collecting ducts and may produce a functional impairment far in excess of that encountered in much larger lesions in the cortex."[1]

The "exquisite sensitivity"[2] of the medulla to infection (as compared with the cortex), highlights the importance of obstruction to the urine flow in the pathogenesis of pyelonephritis. "There is good cause to support the belief that many, perhaps most, cases of human pyelonephritis are the result of infection which reaches the kidney from the lower urinary tract."[3]

to eradicate the pathogens no matter the pathway

FURADANTIN®

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Average Furadantin Adult Dosage: 100 mg. tablet q.i.d. with meals and with food or milk on retiring. *Supplied:* Tablets, 50 and 100 mg.; Oral Suspension, 25 mg. per 5 cc. tsp.

References: 1. Schreiner, G. E.: A.M.A. Arch. Int. M. **102**:32, 1958. 2. Freedman, L. R., and Beeson, P. B.: Yale J. Biol. & Med. **30**:406, 1958. 3. Rocha, H., et al.: Yale J. Biol. & Med. **30**:341, 1958.

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acetylsalicylic acid (300 mg.) and chlormezanone (50 mg.)

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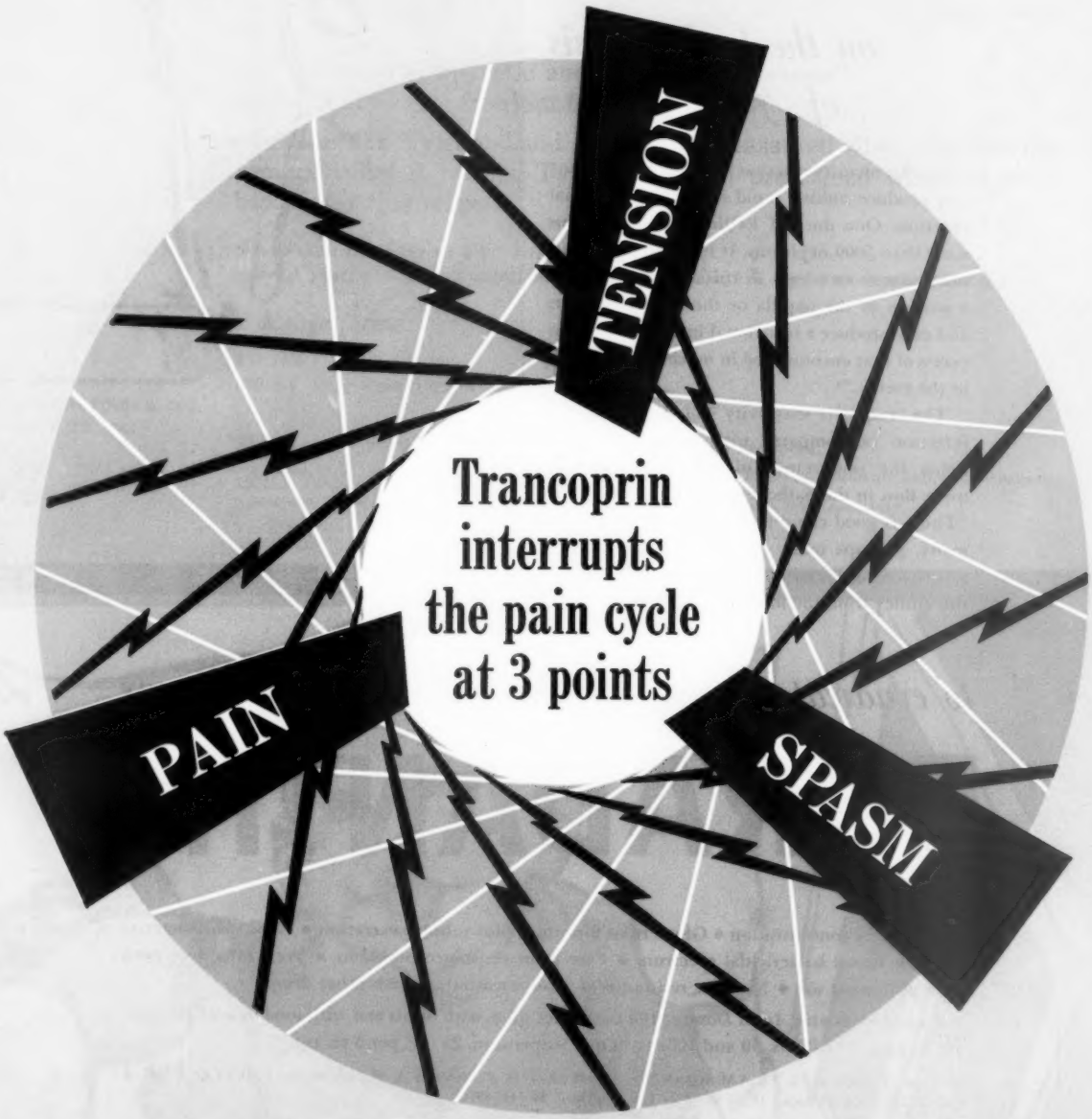

a broad spectrum non-narcotic analgesic

Trancoprin, a new analgesic, not only raises the pain perception threshold but, through its chlormezanone component, also relaxes skeletal muscle spasm[1-6] and quiets the psyche.[2,3-5,7]

The effectiveness of Trancoprin has been demonstrated clinically[8] in a number of patients with a wide variety of painful disorders ranging from headache, dysmenorrhea and lumbago to arthritis and sciatica. In a series of 862 patients,[8] Trancoprin brought excellent or good relief of pain to 88 per cent of the group. In another series,[9] Trancoprin was administered in an industrial dispensary to 61 patients with headache, bursitis, neuritis or arthritis. The excellent results obtained prompted the prediction that Trancoprin "... will prove a valuable and safe drug for the industrial physician."[9]

Exceptionally Safe

No serious side effects have been encountered with Trancoprin. Of 923 patients treated with Trancoprin, only 22 (2.4 per cent) experienced any side effects.[8,9] In every instance, these reactions, which included temporary gastric distress, weakness or sedation, were mild and easily reversed.

Indications

Trancoprin is recommended for more comprehensive control of the pain complex (pain → tension → spasm) in those disorders in which tension and spasm are complicating factors, such as: headaches, including tension headaches / premenstrual tension and dysmenorrhea / low back pain, sciatica, lumbago / musculoskeletal pain associated with strains or sprains, myositis, fibrositis, bursitis, trauma, disc syndrome and myalgia / arthritis (rheumatoid or hypertrophic) / torticollis / neuralgia.

Dosage

The usual adult dosage is 2 Trancoprin tablets three or four times daily. The dosage for children from 5 to 12 years of age is 1 tablet three or four times daily. Trancoprin is so well tolerated that it may be taken on an empty stomach for quickest effect. The relief of symptoms is apparent in from fifteen to thirty minutes after administration and may last up to six hours or longer.

How Supplied

Each Trancoprin tablet contains 300 mg. (5 grains) of acetylsalicylic acid and 50 mg. of chlormezanone [Trancopal® brand]. Bottles of 100 and 1000.

Trancoprin Tablets / **non-narcotic analgesic**

References: 1. DeNyse, D. L.: *M. Times* 87:1512, Nov., 1959. 2. Ganz, S. E.: *J. Indiana M. A.* 52:1134, July, 1959. 3. Gruenberg, Friedrich: *Current Therap. Res.* 2:1, Jan., 1960. 4. Kearney, R. D.: *Current Therap. Res.* 2:127, April, 1960. 5. Lichtman, A. L.: *Kentucky Acad. Gen. Pract. J.* 4:28, Oct., 1958. 6. Mullin, W. G., and Epifano, Leonard: *Am. Pract. & Digest Treat.* 10:1743, Oct., 1959. 7. Shanaphy, J. F.: *Current Therap. Res.* 1:59, Oct., 1959. 8. Collective Study, Department of Medical Research, Winthrop Laboratories. 9. Hergesheimer, L. H.: An evaluation of a muscle relaxant (Trancopal) alone and with aspirin (Trancoprin) in an industrial medical practice, to be submitted.

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Continue use of suppositories during menses. Treatment should be continued throughout a complete menstrual cycle and for several days thereafter. MICOFUR 0.375% and FUROXONE 0.25% in a water-miscible base.

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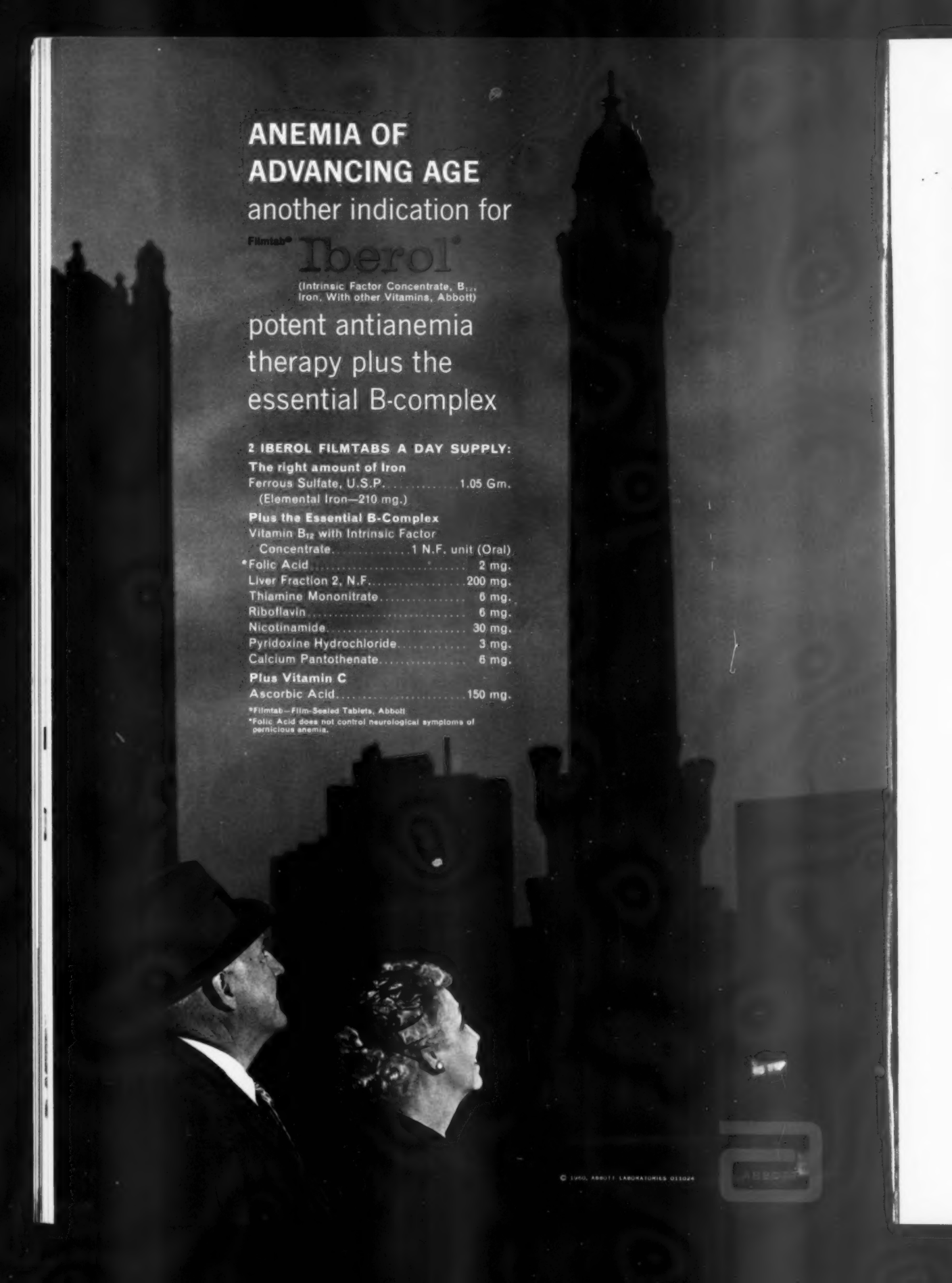
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(Continued on Page 1160)

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3. A. M. A. Committee on Toxicology: Accidental Iron Poisoning in Children J. A. M. A. 170:676, 1959

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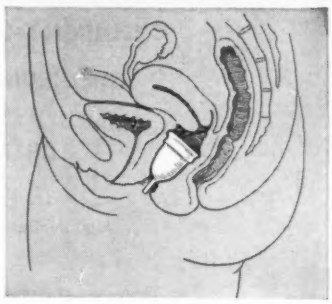

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1. Stephens, V. C., *et al.*: J. Am. Pharm. A. (Scient. Ed.), *48*:620, 1959.
2. Griffith, R. S.: Antibiotic Med. & Clin. Therapy, *1*:320 (May), 1960.
3. Kuder, H. V.: Clin. Pharmacol. & Therap., in press.

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Journal of the
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Volume 15 December, 1960 Number 12

The Mechanism of Cough; a Review

Esther M. Greisheimer, M.D., Ph.D.

THE USEFUL COUGH is a protective reflex, essential to life. Its chief function is to protect the lungs from "a dangerous external intruder or internal enemy. The cough is the watchdog of the lungs."[1] Dr. Jackson was critical of medical men and surgeons of whom he said, "they continually drug this watchdog asleep when his efforts are most needed." He was referring to the danger of using morphine to suppress the cough reflex in the preoperative and postoperative periods. Although we purposely abolish the cough reflex during anesthesia if an endotracheal tube is used, we fully expect a postanesthetic patient to be able to cough by the time the operation is over, in order to protect himself from aspiration pneumonia and obstruction of the airway.

If a patient is paralyzed, as in poliomyelitis, or has had a tracheotomy, mechanical devices simulating effective coughing are used to eliminate retained bronchial secretions.

Dr. Greisheimer is Emeritus Professor of Physiology and Research Professor of Anesthesiology, Temple University School of Medicine, Philadelphia.

There are useless coughs that are harmful to the patient. These are nonproductive; they exhaust the patient and interfere with normal respiratory and circulatory functions.

REFLEX PATHWAY

Since the cough is a reflex, it depends on receptors, afferent nerves, a center in the nervous system, efferent nerves, and effectors.

Not much is known about cough receptors in man, but it is probable that there are two types, one responsive to mechanical stimuli and the other to chemical stimuli. Those that respond to mechanical stimuli are thought to be the rapidly-adapting stretch receptors,[2] since these are found concentrated in those areas of the respiratory passages most sensitive to mechanical stimuli in the cat. The larynx is the most sensitive area, as you know well if you have ever aspirated a particle of food or a drop of water. The carina is the second area of high sensitivity. This is the ridge at the bifurcation of the trachea, between the origins of the right and left main stem bronchi. The third area is the entire lower half of the trachea.[3,4] The main bronchi are apparently insensitive to mechanical stimuli. It is evident that more information is needed to clear up the question of mechanical cough receptors in

man. One wonders why the usual touch receptors, which abound in the skin, are not present here.

The receptors that respond to chemical stimuli are likewise a matter of speculation. The bronchioles and lungs themselves are very sensitive to chemical stimuli, such as sulfur dioxide and other irritating gases in exceedingly low concentrations, but the trachea and larger bronchi are relatively insensitive to chemical stimuli.

The vagus nerves contain the afferent fibers that transmit impulses from cough receptors to the central nervous system. When there is unilateral section of the vagus to alleviate the pain in patients with advanced inoperable bronchogenic carcinoma, the cough reflex is abolished.[5]

The cough center is assumed to be in the medulla,[6] although its location has not been determined with precision.

The principal efferent pathways are the phrenic and intercostal nerves, although the nerves that supply all of the muscles used in forced respiration are likewise involved in vigorous coughing.

The diaphragm, intercostal muscles, the muscles of the larynx and abdominal wall, together with those which elevate and depress the ribs, are involved in coughing. The muscular contractions may be so violent that some of the ribs are broken.

One investigator[7] has suggested that the smooth muscle of the bronchial tree should be included in the list of effectors, since he thinks that it aids in the removal of foreign material by a peristaltic wave, of high speed, originating in the small bronchi and ending at the vocal cords. This possibility is denied by other observers, who find no evidence of such a progressive wave of contraction in the tracheobronchial tree.[8,9] Jackson,[10] who made bronchoscopic observations on the cough reflex, stated that pus seemed to be forced up by squeezing of the lungs during expulsive compression. Therefore, evidence for peristaltic waves in elimination of secretions is lacking, and pressure changes alone can account for the alterations in the tracheal and bronchial diameters, to be discussed later.

SEQUENCE OF EVENTS

The most satisfactory work on the dynamics of the cough mechanism has been done by the group at the University of Rochester, and much of the following information is from their report.[9] They carried out three separate studies on the cough mechanism. In the first, they made recordings of esophageal pressure (to indicate intrapleural pressure) and air flow rates, simultaneously with high speed cinefluorographic records of changes of the tracheal shadow during a series of voluntary coughs in a normal individual. In the second study they made a series of tracings of projections of several roentgen ray motion pictures of coughs from patients having Lipiodol in the lung airways. Measurements were made at various points to show the presence or absence of a wavelike motion by change in tracheal and bronchial diameters. In the third study a section of human trachea was placed in a bottle in which it could be subjected to varying positive pressures. The outline of the tracheal cross section as it would appear on bronchoscopic examination at various positive pressures was traced. By combining these methods of study, valuable information about the cough reflex has been obtained.

The cough begins with a rapid inspiration, lasting about 0.65 second, during which there is a rapid intake of about 2.5 liters of air. This is equivalent to an inspiratory flow rate of 3.85 liters per second (0.65:1::2.5:x). The amount inspired is about 5 times as great as the average tidal volume, and it is thought to be accommodated in the dilated and expanding bronchi to a far greater extent than in the alveoli, since the bronchi are markedly dilated at the peak of this initial inspiration.[4] This was determined by roentgen ray cinematography.

The second event is the closure of the glottis, which lasts about 0.2 second, and serves to entrap the air that has just been inspired.

The third event is an explosive expiratory blast, during which 2.5 liters of air are expelled in about 0.5 second after the opening of the glottis. There is a simultaneous widespread constriction of the trachea and upper bronchial tree[11] as shown by fluoroscopy.

PRESSURE RELATIONSHIPS

During the initial inspiration of the cough, the intrapleural pressure decreases, that is, it becomes more negative, by about 20 mm. Hg. When the vigorous expiratory effort is made, with the glottis closed, the intrapleural pressure becomes positive and rises to seemingly impossible heights. In ordinary coughing it rises to between 50 and 100 mm. Hg, and in more violent coughing it rises to about 250

mm. Hg. In the very vigorous coughing that leads to syncope the intrapleural pressure rises to a maximum of 300 mm. Hg.[12]

In prolonged paroxysms of coughing, which may last several seconds without the patient taking a breath, this high intrapleural pressure is maintained until a breath is taken or the paroxysm ends.

In intermittent coughing in which there is an inspiration before each expiratory blast there are extremely large and rapid fluctuations in intrapleural pressure.

It has been found that after the intrapleural pressure has built up to a high level and the glottis opens, the pressure does not immediately fall to below atmospheric but continues to rise still further momentarily;[13] this was determined by electronic methods of recording. The continued rise in pressure indicates that the expiratory muscles contract even more forcibly after the glottis opens than before. The diaphragm is pushed upward by the abdominal viscera as the muscles of the abdominal wall contract forcefully, and the ribs are depressed by the muscles used in forced expiration.

The exceedingly high intrapleural pressure just preceding the expiratory blast compresses the trachea and bronchi, narrowing their lumina. The importance of this will be shown presently.

FLOW RATE AND LINEAR VELOCITY

The inspiratory flow rate, as stated previously, is about 3.85 liters per second. The expiratory flow rate reaches a sharp peak in the brief instant following the opening of the glottis, and then there is a period of almost uniform flow rate.[13] It may be greater than 11 liters per second during the peak flow rate and from 5 to 6.5 liters per second in the sustained period.

It is interesting to calculate the linear velocity of the air in the expiratory blast.[9] If a diameter of 1.4 cm. is assumed for the uncompressed trachea, the cross section area is about 1.5 sq. cm. (πr^2). With a gentle cough only one liter may be expelled in one second. Since the linear velocity is the volume divided by the cross section area, it is equal to 667 centimeters per second. This is equivalent to a 15 mile per hour wind.

With a violent cough 6.5 liters may be expelled in one second. In the uncompressed trachea the linear velocity of this blast is 4,333 cm. per second, which is equivalent to a 97 miles per hour wind, of hurricane velocity.

As the intrapleural pressure is increased the tracheal diameter is decreased. Mean linear velocity varies inversely as the cross section area, consequently, if a constant flow rate is to be maintained during the expiratory blast, there must be a large increase in linear velocity.[9] The greatest compression, or smallest tracheal diameter, was noted at 0.85 second after the beginning of the cough, just when the intrapleural pressure was highest. Moreover, a reduction in the apparent diameter occurred simultaneously in all the bronchi measured and along the whole span of trachea included in the measurements. At the end of the cough the return to normal diameter occurred simultaneously in the entire extent of the upper airway. This evidence rules out the possibility of a peristaltic wave in the smooth muscle of the tracheobronchial tree during coughing.

If we assume that the high intrapleural pressure compresses the trachea to one sixth of its normal cross section area, then the linear velocity will be six times greater than before, or 582 miles per hour. When this is compared with the speed of sound,[9] we find that we fall just a little short of breaking the sound barrier in a violent cough (582/750=77 per cent). It is evident that the decrease in tracheal diameter contributes to the increase in velocity of the expiratory blast. Some investigators still find it difficult to accept the fact of compression of the trachea by the high intrapleural pressure.[14]

KINETIC ENERGY OF THE EXPIRATORY BLAST

The kinetic energy of a moving air stream increases as the square of the velocity. In the trachea that is compressed to one sixth of its normal cross section area, the force available to move material is 36 times greater than it is in the uncompressed trachea. It is small wonder that the particles of sputum can be carried as far as 12 to 15 feet by a cough.[15]

DEFICIENCIES OF COUGHING MACHINES

Various mechanical devices have been developed for aiding the removal of secretions from the bronchi of individuals who are unable to cough effectively.[16,17,18] What is lacking is the effect of the high intrapleural pressure on the trachea and bronchi, that is, the

means of increasing the velocity of the air flow. The flow rates are high, but the increase in linear velocity due to narrowing of the tracheobronchial tree is needed in addition.

ASSOCIATED CHANGES

The associated changes in the circulatory system are important. The circulatory effects are proportional to the violence of the cough, so there are large changes in blood pressure with vigorous coughs. The arterial blood pressure rises to a high level during a cough, and then falls to a low level afterward. If it falls to the critical level of 50 mm. Hg, cough syncope occurs. This is more frequent in middle aged men than in younger men and in women. In the last it is rare indeed. Cough syncope does not occur in individuals who have productive coughs. As one heads toward cough syncope the vision becomes blurred, the individual is unable to respond to commands, and consciousness is lost. Clonic twitchings and convulsions may accompany the loss of consciousness.[19,20,21] The pulse pressure decreases markedly and the heart rate may increase during the period of hypotension. Blood accumulates in the peripheral veins and this decreases the filling pressure of the heart, leading to a fall in stroke volume and cardiac output. It is possible that the aorta may be compressed when the intrapleural pressure greatly exceeds the arterial blood pressure.

During coughing the cerebrospinal fluid pressure rises immediately to the level of that in the thorax.[22] When this occurs the blood flow to the brain is greatly curtailed. It is evident that there are several possible explanations for cough syncope.

There are many conditions that produce upper respiratory "tickle". Some of these are smoking, drinking, infected teeth, and postnasal drip. The tickle may become a habit. Since this type of coughing is useless, and harmful to the patient, it should be stopped.

REFERENCES

1. Jackson, C.: Postulates on cough reflex in some of its medical and surgical phases, Therap. Gaz. *44*:609-610, Sept., 1920.
2. Widdicombe, J. G.: Receptors in trachea and bronchi of cat, J. Physiol. *123*:71-104, Jan., 1954.
3. Widdicombe, J. G.: Respiratory reflexes from trachea and bronchi of cat, J. Physiol. *123*:55-70, Jan., 1954.
4. Franklin, K. J., and Janker, R.: Coughing studied by means of x-ray cinematography, J. Physiol. *92*:467-472, May, 1938.
5. Klassen, K. P.; Morton, D. R., and Curtis, G. M.: Clinical physiology of human bronchi; effect of vagus section on cough reflex, bronchial caliber and clearance of bronchial secretions, Surgery *29*:483-490, April, 1951.
6. Douglass, B. E.: Symposium on bronchial and pulmonary disease; causes and treatment of cough, M. Clin. North America *38*:949-962, July, 1954.
7. di Rienzo, S.: Bronchial dynamism, Radiology *53*:168-183, Aug., 1949.
8. Stutz, E.: Bemerkungen zu der Arbeit S. di Rienzo: Physiopathologie des Hustens, Fortschr. Geb. Röntgenstrahlen *79*:187-192, Aug., 1953.
9. Ross, B. B.; Gramiak, R., and Rahn, H.: Physical dynamics of cough mechanism, J. Appl. Physiol. *8*:264-268, Nov., 1955.
10. Jackson, C.: Cough; bronchoscopic observations on cough reflex, J.A.M.A. *79*:1399-1403, Oct. 21, 1922.
11. Dayman, H.: Mechanics of airflow in health and in emphysema, J. Clin. Invest. *30*:1175-1190, Nov., 1951.
12. Sharpey-Schafer, E. P.: Mechanism of syncope after coughing, Brit. M.J. *2*:860-863, Oct. 17, 1953.
13. Whittenberger, J. L., and Mead, J.: Respiratory dynamics during cough, Tr. Nat. Tuberc. A. *48*:414-418, 1952.
14. Weber, H. H.: Radiologische Exploration des Hustenaktes nach Ergebnissen der bewegungsgraphischen Röntgendiagnostik, Fortschr. Geb. Röntgenstrahlen *90*:452-474, April, 1959.
15. Hobby, A. W.: Cough: its pathology, therapy and management, Dis. Chest *22*:196-205, Aug., 1952.
16. Barach, A. L.; Beck, G. J.; Bickerman, H. A., and Seanor, H. E.: Physical methods simulating mechanisms of human cough, J. Appl. Physiol. *5*:85-91, Aug., 1952.
17. Barach, A. L.; Beck, G. J., and Smith, W.: Mechanical production of expiratory flow rates surpassing capacity of human coughing, Am. J. M. Sc. *226*:241-248, Sept., 1953.
18. Stoffregen, J.: Artificial coughing; new apparatus for paralyzed patients, Dis. Chest *36*:56-59, July, 1959.
19. Sharpey-Schafer, E. P.: Effects of coughing on intrathoracic pressure, arterial pressure and peripheral blood flow, J. Physiol. *122*:351-357, Nov., 1953.
20. Kerr, A., Jr., and Derbes, V. J.: Syndrome of cough syncope, Ann. Int. Med. *39*:1240-1253, Dec., 1953.
21. McIntosh, H. D.; Estes, E. H., Jr., and Warren, J. V.: Mechanism of cough syncope, Am. Heart J. *52*:70-82, July, 1956.
22. Hamilton, W. F.; Woodbury, R. A., and Harper, H. T., Jr.: Arterial, cerebrospinal and venous pressures in man during cough and strain, Am. J. Physiol. *141*:42-50, March, 1944.

Radiation Therapy in the Management of Cancer*

Florence C. H. Chu, M.D.

RADIATION THERAPY has made considerable progress in the last two decades. Much of this progress has been due to an increased knowledge of fundamentals of radiation physics and radiobiology and the improvement of facilities and equipment. The most important factor of all, however, has been an increasing appreciation of the natural history of cancer; out of this has developed a growing co-operation between radiotherapists and their surgical and medical colleagues. A real attempt is being made to fully utilize each discipline in the management of our patients.

In evaluating each patient it is necessary to consider the merits of each modality available. The nature of the primary lesion, the extent of the disease, and the patient's general condition are carefully considered before a decision can be made regarding whether surgery, radiotherapy, chemotherapy, or a combination of methods is to be used. If radiotherapy is the choice further consideration must be given to determine whether treatment is an attempt to cure or palliate the disease. Curative radiotherapy usually involves a relatively prolonged course of treatment carried to a high dosage level. This may very well be associated with systemic and/or local tissue reactions. On the other hand, with palliative therapy, one cannot justify the use of long periods of time or dosages that produce severe reactions.

Let us consider some of the more frequent sites of cancer to illustrate the role that radiotherapy can play in the management of these patients.

CARCINOMA OF THE CERVIX

Carcinoma of the cervix occurs in 30 per 100,000 women a year. Since the discovery of radium and roentgenography cancer of the cervix has been submitted to radiation, first as a palliative method and then as an alternative to surgery. As radiation techniques improved, irradiation became the preferable form of treatment. The results of radiation therapy are at least equal if not superior to those of surgery, and the method is safer, simpler, easier, and less unpleasant. It is widely applicable to all stages of the disease. Many clinics report that 93 to 97 per cent of all patients with cervical disease are suitable for treatment by radium insertion and supplemental external radiation. This is an important point since it means that relatively few patients are denied treatment because of advanced age or other contraindications to the method of treatment. In the survey made by Nickson [1] the five year survival rate obtained by various centers was reviewed. In the treatment of patients with stage I carcinoma the five year survival rate is greater than 70 per cent in most centers. The five year results of treatment of patients with stage II cancer range from 50 to 58 per cent and of patients with stage III cancer 25 to 36 per cent. If one examines the data from one clinic,[2] the survival rates in patients with stage II and stage III carcinoma of the cervix show a steady increase for each time segment reported (Table I). This improvement of results is attributed in part to improved skill in the management of patients with this condition and in part to the

* Presented at the Annual Meeting of Women's Medical Society of New York State, New York City, May 8, 1960.

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TABLE I
Temporal Comparisons in Carcinoma of the Cervix

Author	Years	Stage II		Stage III	
		No. Cases Seen	% 5 Year Survival	No. Cases Seen	% 5 Year Survival
Truelsen[2]	1922-1929	67	36	422	17
	1930-1933	92	37	306	23
	1934-1937	148	44	316	21
	1938-1943	355	52	496	36

addition of external radiation to the standard radium insertion. As expected, the results of treatment of patients with stage IV carcinoma are poor—the five year survival rate is less than 10 per cent.

Nickson's survey was made in 1952. The results are still improving. In the recent annual report of the M.D. Anderson Hospital and Tumor Institute, Houston, Texas,[3] the stage I patients have a five year survival rate of 89 per cent and the stage II patients 66 per cent. The over-all survival rate is almost 50 per cent.

An examination of the results raises several questions. There is a group of patients seen at the early stages who fail to be cured by radiation. Is this due to radioresistance of the tumor? If this is radioresistance, then would surgery offer a better chance of curing these patients? How can we recognize radioresistance at an early stage? The Grahams,[4,5] by cytological examination of vaginal smear material, have reported their ability to predict fairly accurately the response of the tumor to radiation. Their findings have been supported by several other workers including Margrethe A. Nielsen of Copenhagen.[6, 7] Perhaps in the not too distant future the choice of radiotherapy or surgery or both will be based on cytological classifications.

CANCER OF THE HEAD AND NECK

Many lesions of the head and neck can be treated either by surgery or by radiation. There is no doubt that radiation offers better functional results. In carcinoma of the larynx cure of the cancer with preservation of voice and normal or near-normal speech and avoidance of trachcotomy are blessings of successful radiation treatment.

In early lesions of the vocal cord the results of limited surgery such as laryngofissure and radiation therapy are equally good. In more advanced cases, laryngectomy may give better results, but then all the functional disabilities follow.

The success of radiotherapy in treatment of carcinoma of the larynx depends largely on careful planning. By using supervoltage roentgen rays and small cross-firing fields a tumor dose of 6,000 r can easily be delivered in a period of six weeks without undue complications such as severe mucositis or cartilage necrosis. In the event that radiation fails laryngectomy can always be considered.

Carcinoma of the skin and of the lip is highly curable by radiotherapy. The cosmetic results are usually good. Carcinoma of the anterior two thirds of the tongue is curable by implantation of low-intensity radium needles, thus avoiding a glossectomy in many patients.

CARCINOMA OF THE BREAST

In this country carcinoma of the breast is the commonest of all cancers in women. Radiation plays an important role in all stages of the disease. At Memorial Hospital operable patients receive postoperative radiation to the internal mammary and supraclavicular lymph nodes to complement the surgical procedure. However, in most clinics more than one third of the patients are inoperable when first seen. In inoperable patients radiation remains the most effective agent in controlling the primary lesion and its regional metastases. The following case is an example.

A 64 year old white woman in 1949 noted a lump in the right breast which gradually increased in size and finally ulcerated. When first seen in Memorial Center for Cancer and Allied Diseases in 1950 she had an inoperable condition with a large ulcerated tumor in the right breast and enlarged lymph nodes in the axillae and superclavicular fossae (Fig. 1, *left*). Results of biopsies were positive for mammary carcinoma. The patient was placed on estrogen therapy, and radiation treatment was given to the right breast and its regional nodes—using roentgen ray of 1,000 kv. (The advantage of supervoltage radiation over orthovoltage radiation in the range of 200 to 250 kv. is that it allows a higher and more homoge-

neous tissue dose with less skin and systemic reaction.) The tumor dose given to this patient was 6,000 r in a period of six weeks. There was complete regression of the tumor with healing of the ulcer. (Fig. 1, *right*). The patient died of liver metastasis two years later with no sign of reactivation of the local disease. At autopsy there was evidence of widespread metastases but no viable tumor in the irradiated right breast or its regional nodes.

Since 1955 we have been using the high-energy electron beam produced by the betatron to treat inoperable breast cancer. The electron beam has the characteristic of sharp fall-off. Therefore, one can regulate the depth of penetration by varying the energy of the electron beam. For example, 10 mev energy does not penetrate more than 3 or 4 cm. of tissue and therefore can be effectively used to treat superficial lesions less than 3 cm. deep. On the other hand, deeper and thicker lesions can be treated by a higher energy level in the range of 18 to 22 mev. Because of the sharp fall-off the tissues beyond the first several centimeters receive very little radiation. This is important in the case of irradiating inoperable or recurrent breast carcinoma because the lung tissue can be relatively spared from radiation. Radiation pneumonitis and fibrosis has always been a problem with conventional irradiation employing orthovoltage and supervoltage roentgen rays.[8,9] We have reviewed 70 patients with inoperable or recurrent mammary carcinoma treated with a high-energy electron beam in the first three years of its operation.[10] The tumor response was excellent and there was not a single case of radiation pneumonitis in that group.*

In addition to treatment of the primary tumor and its regional nodes, radiation can also be extremely effective in controlling a local recurrence for long periods of time. When widespread metastases are present hormone treatment should be used. The alteration of the patient's hormone status can be achieved by ablative procedures such as castration, either by radiation or by oophorectomy, adrenalectomy and hypophysectomy, or by the addition of androgens, estrogens, or corticosteroids.

During the period of endocrine therapy radiation should still be used in treating a local lesion for prompt and effective relief of symptoms. In a joint study performed with the Endocrine Service and the Breast Service at Memorial Hospital, it was found that endocrine produces a lower probability of favorable response in the individual lesions than does radiation.[11] Its chief advantage is that it acts systemically and seems to produce slightly longer survival time in the group of patients who respond to this type of treatment.

LYMPHOMA

It is well known that lymphomas are sensitive to radiation. Patients with class 1 unifocal lymphomas should be treated intensively. Sur-

* Since the completion of that review in 1959 3 patients who were treated by the betatron have been seen with radiation pneumonitis and fibrosis in a small segment of the anterior lung.

Fig. 1. *(Left)* Inoperable carcinoma of the right breast, with ulceration and lymph node metastases. *(Right)* Regression of the tumor and healing of the ulcer after a tumor dose of 6,000 r in six weeks. No evidence of reactivation of the local disease at the time of her death two years later.

Fig. 2. *(Left)* Recurrent large intestine carcinoma fungating through the abdominal wall before radiation treatment. *(Right)* Good palliative results obtained by irradiation.

gical extirpation, where possible, should be followed by radiation therapy. A dose level of 3,500 to 4,000 r in three to four weeks is indicated. This is an attempt to cure. Class 2 patients with involvement of regional nodes but without constitutional symptoms should be treated by radiation, and a tumor dose of 2,500 r in two to three weeks is recommended. Class 2 patients with constitutional symptoms and class 3 patients with generalized disease may be subjected to chemotherapy. Radiation is effective in the palliative management of bulky disease and for emergency situations such as spinal cord compression, intestinal obstruction, intracranial involvement, and impending pathologic fractures.

PALLIATIVE THERAPY

So much for the specific examples of diseases where radiation plays a major role in their management. Radiation can also be applied in many situations for palliation. As a matter of fact, radiotherapy is one of the most valuable palliative tools available. Many cancers that are not curable by any means can be made to regress or are held in check by irradiation. The radiation dose required to achieve palliation is usually lower than that for cure. Palliative treatment should not produce severe untoward reactions. The chief purpose of palliative treatment is to alleviate or prevent distressing symptoms such as pain, discharge, bleeding, or starvation so that the remaining life will be more comfortable and more tolerable. On occasions, prolongation of life is possible when the pressure of tumor masses on a vital organ is relieved, such as the shrinkage of a mediastinal mass that is causing obstruction to the air passage.

Infected, ulcerated, and bleeding masses may regress under the influence of irradiation. An example illustrating good palliative results concerns a male patient with recurrent carcinoma of the large intestine which fungated through the abdomen (Fig. 2, *left*). The pain, the profuse discharge, and the foul odor were almost unbearable for him. After a course of radiation the tumor mass regressed (Fig. 2, *right*) and the symptoms were relieved. The palliation lasted approximately one and a half years. No doubt this patient was extremely grateful for the marked improvement offered by radiation.

Osseous metastases from various primary cancers usually respond very well to radiation therapy. With a moderate dose (2,000 r tumor dose delivered in a period of two weeks) one can expect relief of pain and recalcification of bone in the majority of patients. An example of this concerns a woman who had advanced mammary carcinoma with widespread metastases. The osteolytic metastases in the right ilium (Fig. 3, *left*) were causing pain and incapacitation. After radiation treatment the pain was relieved, calcium deposits reappeared in the previously lytic areas (Fig. 3, *right*), and the patient was able to walk again. Her palliation lasted six months before she succumbed to advanced cancer.

Radiation therapy of brain metastases very often produces gratifying results. The symptoms of brain metastases such as headache, vomiting, aphasia, diplopia, paraplegia, and

incontinence are distressing and disabling. The Department of Radiation Therapy of Memorial Center has treated more than 200 patients with brain metastases from various primary cancers during the past years.[12, 13] Approximately 3 out of 4 patients who received adequate dosage had relief of symptoms. Some of the patients were able to go back to work and live a useful life for several months or longer. The longest period of remission was 27 months.

Although the results of radiotherapy and surgery in many cancers are successful, improvement in results is badly needed in some conditions, particularly in those cancers that are not amenable either to surgery or to radiation. Bronchogenic carcinoma, carcinoma of the esophagus, and osteogenic sarcoma, for example, fall into this group. The five year survival rate is uniformly poor and, therefore, neither a surgical nor radiotherapeutic approach alone is enough. Perhaps a joint effort could produce better results. This reasoning has led to many investigative programs.

CANCER STUDIES

The Rectal Service of Memorial Center reviewed over 1,000 cases of rectal carcinoma treated during the years 1939 to 1951.[14] They found that preoperative irradiation benefited those patients with lymph node metastases. The five year survival rate increased from 23 per cent to 37 per cent. On the basis of this study, the Rectal Service of the Department of Surgery and the Department of Radiation Therapy of Memorial Hospital are conducting a controlled study to evaluate further the efficacy of this combined treatment.

It is well known that bronchogenic carcinoma has a very poor prognosis. Its five year survival rate is less than 10 per cent. Clearly a change in the method of treatment is warranted to determine whether the survival rate can be improved. Bloedorn and his associates at the University of Maryland Hospital[15] are currently investigating the results of intensive radiotherapy, with a dose of 6,000 r in six weeks, followed four to six weeks later by radical surgery. Although their series is still small, the preliminary results are encouraging. Twenty-one nonresectable patients and 5 inoperable ones due to medical reasons were made resectable after radiation treatment. Moreover, 54 per cent of the primary tumors became histologically negative and 92 per cent of the positive lymph nodes became free of disease. At the time of Bloedorn's report before the American Radium Society, 13 of his 26 patients were still alive and 1 was going into the fifth year.

Similarly, in the treatment of osteogenic sarcoma the results of primary amputation were very discouraging because the five year survival rate was also under 10 per cent. In 1950 the Bone Service of the Department of Surgery and the Radiation Therapy Department of Memorial Hospital started a co-operative investigation to give massive preoperative irradiation in the order of 12,000 r in eight days, followed immediately by amputation.[16]

Fig. 3 *(Left)* Osteolytic mestastases to right ilium with pain and limping from carcinoma of the breast. *(Right)* Relief of symptoms and recalcification of bones after roentgen-ray therapy to the right side of the pelvis.

Thirty-eight patients have been treated so far, and 20 of these were treated more than five years ago; 5 of these 20 survived for five years free of disease, but 1 of them developed pulmonary metastases and died in the sixth year. Thus, the cure rate so far appears to be higher than it was without preoperative irradiation.

The same principle of combined approach may also be applied to other conditions such as carcinoma of the esophagus [17] and the infiltrative type of bladder carcinoma. Radiation may extend the usefulness of surgery. It is this continuous effort of many workers to explore different methods of treatment that makes progress in cancer medicine.

SUMMARY

In conclusion, radiation is an indispensable tool in the management of cancer. Its usefulness has many facets in the cure and in the palliation of diseases. It can be used alone or it can be used in combination with other forms of treatment such as surgery or chemotherapy. To perform good radiation therapy requires knowledge, skill, and co-operation with other members of the team. With the current trend of continuous progress, I am confident that more and more patients with cancer will be benefited.

REFERENCES

1. Nickson, J. J.: Results on treatment of cancer of the cervix with radiation therapy, in Proceedings of the Second National Cancer Conference, 1952; pp. 699-708.

2. Truelsen, F.: Cancer of the Uterine Cervix, London, H. K. Lewis & Co., Ltd., 1949, cited by Nickson.[1]

3. The University of Texas M.D. Anderson Hospital and Tumor Institute, Annual Report 1958: pp. 11-14.

4. Graham, J. B., and Graham, R. M.: The sensitization response in patients with cancer of the uterine cervix, Cancer *13*:5-14, Jan.-Feb., 1960.

5. Graham, R. M., and Graham, J. B.: Factors in prognosis in cancer of the uterine cervix; desquamation of malignant cells, Cancer *13*:15-19, Jan.-Feb., 1960.

6. Nielsen, A. M.: Value of cyto-prognostic test in treatment of carcinoma of cervix, in Transactions of the First International Cancer Cytology Congress, 1956; pp. 293-299.

7. Nielsen, A. M.: Personal communication with James J. Nickson, Chief, Department of Radiation Therapy, Memorial Hospital, New York City.

8. Chu, F. C. H.; Phillips, R.; Nickson, J. J., and McPhee, J. G.: Pneumonitis following radiation therapy of cancer of the breast by tangential technic, Radiology *64*:642-653, May, 1955.

9. Chu, F. C. H.; Nickson, J. J., and Uzel, A. R.: The effect of ACTH and cortisone on radiation pneumonitis, Am. J. Roentgenol. 75:530-541, March, 1956.

10. Chu, F. C. H.; Sheer, A. C., and Gaspar-Landero, J.: Electron beam therapy in the management of carcinoma of the breast. In press.

11. Chu, F. C. H.; Sved, D. W.; Esgher, G. C.; Nickson, J. J., and Phillips, R.: Management of advanced breast carcinoma, with special reference to combined radiation and hormone therapy, Am. J. Roentgenol. 77:438-447, March, 1957.

12. Chao, J. H.; Phillips, R., and Nickson, J. J.: Roentgen-ray therapy of cerebral metastases, Cancer 7:682-689, July, 1954.

13. Chu, F. C. H., and Hilaris, B. B.: Value of radiation therapy in the management of intracranial metastases. In press.

14. Bloedorn, F. G.; Cowley, R. A.; Cuccia, C. H., and Mercado, R.: Combined therapy; irradiation and surgery in the treatment of bronchogenic carcinoma, presented at the Forty-Second Annual Meeting of the American Radium Society, San Juan, Puerto Rico, March, 1960.

15. Stearns, M. W., Jr.; Deddish, M. R., and Quan, S. H.: Preoperative roentgen therapy for cancer of the rectum, Surg. Gynec. & Obst. *109*:225-229, Aug., 1959.

16. Francis, K. C., and others: Massive preoperative irradiation in the treatment of osteogenic sarcoma in children, Am. J. Roentgenol. 72:813-818, Nov., 1954.

17. Cliffton, E. E.; Goodner, J. T., and Bronstein, E.: Preoperative irradiation for cancer of the esophagus, Cancer *13*:37-45, Jan.-Feb., 1960.

Dr. Keiko Okami

JAPAN'S FIRST FEMALE MEDICAL STUDENT WHO STUDIED ABROAD

Yoji Nagatoya, M.D.

Until the end of World War II it was practically impossible for women in Japan to receive a medical education in Japanese colleges or universities. Especially toward the end of the nineteenth century, when the remnants of feudalistic ideas of the Tokugawa regime still lingered, it was considerably difficult for Japanese women in general to receive higher education.

It was in such times that Keiko Okami went to the United States to study in the Woman's Medical College of Pennsylvania in Philadelphia. She graduated from this college in 1889. I should like briefly to describe her personal history, with some comments on its historical significance.

HER LIFE STORY

Keiko Okami was born in 1859. In 1867 her whole family moved to Tokyo because of her father's plan to start a foreign trade business. She entered the Yokohama Kyoritsu Girls' School in 1873 and graduated in 1878. She then entered another school, the Takebashi Girls' School, but had to leave it when the school was abolished in 1880. In 1881 she became a teacher of English at the Sakurai Girls' School, and in 1884 married Senkichiro Okami who was then a teacher at the Shoei Girls' School. One month after their marriage her husband went to the United States to study at the Michigan College of Agriculture. Three months later, in December, 1884, she followed her husband to the United States. In 1885 she entered the Woman's Medical College of Pennsylvania. She graduated in 1889, and returned to Japan with her husband. In the same year she obtained a license to practice medicine in Japan and accepted the position as head of the department of gynecology at the Jikei Hospital (predecessor of the present Tokyo Jikei-Kai Medical College). She remained in this post for three years and resigned from it in 1892. In 1893 she started to practice independently at her home, and, in the same year, she opened a sanitarium named Eisei-En. This was officially authorized in 1897 by the Governor of the Tokyo Prefecture as a sanitarium attached to a branch of Akasaka Hospital. In this sanitarium she adopted a policy emphasizing prevention of tuberculosis and the care of convalescent patients. Further, she established a school in the sanitarium to train nurses, and, at the same time, introduced a system of dispatching nurses when they were called on. In 1906, however, these were all closed down and she became a teacher of English at Joshi Gakuin, a woman's college. In 1908, after recognizing the early signs of breast cancer, she resigned and underwent an operation. After the operation she withdrew from the medical profession and led a quiet life at home for the rest of her life. In 1936 her husband died. About that time she was again afflicted with breast cancer and underwent a second operation. In 1941 she died of diseases of the liver and gall bladder at the age of 81.

Dr. Nagatoya, a dermatologist at Nissei Hospital, Osaka, Japan, is a member of the Japanese Society of Medical History and has published many articles on medical women.

COMMENT

At the time when she entered girls' schools there were almost no schools in Japan except a few Christian mission schools established by foreign missionaries. In those days there were few Japanese girls attending even primary schools. It was due, it is believed, to her desire to master the English language that she studied

in more than one school under such conditions. After finishing her studies she became a teacher of English, when a woman teacher was still an extremely rare occurrence in Japan.

Her marriage was a love-match, also a rare phenomenon in Japan in those days, uniting the common view of life held by her and her husband: a bond of Christian faith and missionary work for poor people.

The Woman's Medical College of Pennsylvania was originally established in 1850 under the name of Female Medical College of Pennsylvania. It was the first medical college for women in the whole world, and it is now considered the only medical college for women in the Western Hemisphere. In 1852 the school sent out its first eight graduates.[1]

It was during the time of Dean Rachel Bodley that Keiko Okami entered the College. One of the works to which Dean Bodley put great effort was sending medical missionary women to Asian countries. The first such missionary was Clara Swain, who went to India in 1869, during the deanship of Ann Preston. A number of other graduates from the College were later sent to India, China, and Korea.[1, 2] It is not known definitely whether a graduate from the College came to Japan or not, but it is known for a fact that two or three medical missionary women, graduates of other American schools, did come to Japan.

In response to the medical missionary work of the school, there was started a movement of Asian students going to the United States for study. The first such Asian student was an Indian, Anandibai Joshee. She entered the College in 1883 and graduated from it in 1886. She was the first Hindu woman in the world to receive a medical degree.[1, 2] The second Asian woman to study in the school was Keiko Okami.

The reason Keiko Okami decided to study medicine has not been made clear, to our regret. It may be presumed, however, that she considered missionary work as being of primary importance in her life and chose the medical profession as a means of building a basis for such a life. It is described in the "History of the Woman's Medical College"[1] that she heard of the medical missionary work of the school and came to the United States to study. As mentioned previously, it is not clear whether any of the graduates from the school had come to Japan at that time as medical missionary women, but it is presumed that she, being a Christian, had frequent opportunities to talk with foreign missionaries in Japan and thus came to hear of the medical missionary work and further acquired a certain amount of knowledge about the nature of the school and the contents of the curriculum. It is believed that her husband's decision to go to the United States for study prompted her to sail to the United States herself for study.

MEDICAL WOMEN IN JAPAN

The first officially authorized woman physician in Japan was Ginko Ogino,[3] who was granted a license in 1885. After her, a number of other Japanese women were licensed as physicians, but in those days in Japan a satisfactory system of medical education had not yet been established and many of the physicians were graduates of unauthorized private medical schools. To be sure, there were some medical colleges in existence but all of these colleges were closed to women. Moreover, the private medical schools also came to close their doors to women, and this prompted Dr. Yayoi Yoshioka to establish, in 1900, Tokyo Joi Gakko (Tokyo Woman's Medical School). This school was recognized by the Japanese government in 1920[3] and was elevated to the status of college in 1950. (It is now Tokyo Woman's Medical College.) After this time coeducation came to be practiced in Japan, enabling women to study freely in colleges and universities.

In short, Japanese women were barred from medical study in colleges or universities in Japan until after World War II. There was no alternative for a Japanese woman desirous of studying medicine but to go overseas to study in a foreign school.

The first group of Japanese women who went overseas for study, five in number, included Umeko Tsuda (founder of the present Tsuda College for Women in Tokyo), who went to the United States in 1872. None of these women, however, studied medicine, nor did other Japanese women who subsequently went to the United States for study. About that time in Japan there were many persons who went to Germany for study, but the only woman among them was Dr. Mizuko Takahashi.

For some time after Keiko Okami, there were no Japanese women graduates from the Woman's Medical College of Pennsylvania until 1910, when two Japanese women, Moto

Nakagawa and Misao Aizawa, were graduated at the same time. In addition, before and after that time, there were some other Japanese women who studied medicine in the United States, including Drs. Tomoko Inoue and Kameyo Sadakata who graduated from the University of Michigan in 1901 and 1923, respectively. In recent years many more Japanese women have received medical degrees from various universities and medical colleges in the United States.

It is indisputable that Keiko Okami was the first Japanese woman to study in the Woman's Medical College of Pennsylvania, but I presume that she was the first Japanese woman on the following points also, in addition to being the first Japanese graduate from that school: (1) she was the first Japanese woman to study medicine in an overseas school; (2) she was the first Japanese woman who received a complete college education in medicine; and (3) she was the first among Japanese women to receive the degree of doctor of medicine.

DR. OKAMI IN JAPAN

After she returned home to Japan, the path of life that lay ahead of her was not altogether an even one. It was an exceptional instance when she was appointed to the honorable post of head of the department of gynecology at Jikei Hospital, but her ambition crumbled as she was not permitted to be received in audience by Emperor Meiji, who visited the hospital in 1892, because she was a woman. This was more than she could bear, after having been imbued with the idea of democracy in the United States. She resigned from the hospital.

The Eisei-En sanitarium, founded by her, was based on the high ideal of prevention of tuberculosis and the care of convalescing patients, but this ideal was too far detached from the generally prevailing level of medical treatment in Japan at that time, and, moreover, the hospitalization fees were rather high. As a result, the sanitarium was soon closed.[4]

SUMMARY

Keiko Okami (1859-1941) was the first Japanese woman to be graduated from the Woman's Medical College of Pennsylvania. In addition, she was the first Japanese woman to study medicine in an overseas school and the first woman to complete the curriculum of the college of medicine. Naturally, she was the first Japanese woman to receive a doctor of medicine degree.

REFERENCES

1. Alsop, G. F.: History of the Woman's Medical College, Philadelphia, J. B. Lippincott Co., 1950.
2. Pearce, L.: A century of medical education for women, Ind. Woman *29*:104-106, April, 1950.
3. Lovejoy, E. P.: Women Doctors of the World, New York, The Macmillan Company, 1957.
4. Nagatoya, Y.: Keiko Okami, Japanese Medical Journal, 1958.

Three foreign students at Woman's Medical College of Pennsylvania. *Left to right:* Dr. Anandibai Joshee, India, class of 1886, first Hindu woman in world to receive M.D. degree; Dr. Keiko Okami, 1889; Dr. Sabat M. Islambooly, Syria, 1890, that country's first woman physician.[2]

President's Message

The other day at an annual medical meeting I was discussing with a male colleague the question of dwindling applications to medical schools throughout the country. As we discussed the core of the problem, I added that one possible solution was to encourage more women to apply to medical school. At this moment another physician joined us and said, with no little emphasis, "I disagree with you *two hundred* per cent." He added further emphasis by saying that he had just spent considerable time dissuading his daughter from entering medical school.

Of course, I felt challenged and defensive at the same time. His reasons, which he had ready at the tip of his tongue, were those that we have all heard so many times before: In essence they were that each woman in medical school has taken a man's rightful place, and that all too frequently after graduation, marriage and family divert her from her medical career. Thus her "spot" in that class has been wasted and the final tally is one less practicing physician.

I countered with the factual data that have been gathered in formal and informal studies. That women do not waste their medical education but very skillfully manage both career and family matters can be shown in the vast majority of cases. True, some do drop their medical activities, but even among these women are those who return to a medical career as soon as there is an opportunity. Further, the medical activities taken on full or part time by many women physicians are those of a community nature, which the busy male practitioner cannot or does not take on. School health examinations, well-child conferences, adult health education, public health clinics—the responsibility for these is a natural role for the woman physician. She accepts this role willingly and in many instances on a volunteer basis. Thus, as a group, I am sure that the education of women in medicine is justified. I do feel, however, that each of us, after honest soul searching, must as individuals answer the question: "Have I utilized my medical education to the fullest and thereby cancelled my moral debt to the community and society?"

Claire F. Ryder M.D. M.P.H.

Scholastic Awards—1960

Since 1953 the AMWA has honored the outstanding young women who graduated from medical school in top-ranking positions. This year there were 5 students graduating in first place and 18 who were in the upper 10 per cent of their class. These young women won honors in 21 of 83 U.S. coeducational medical schools; Woman's Medical College of Pennsylvania, Philadelphia, is the twenty-second school represented. The following table illustrates the percentage of women graduating with honors from the 21 coeducational schools.

Percentage of Women Graduating from Twenty-One Coeducational Medical Schools with Honors

School	No. Graduating	Women Graduating		Women in Top 10%		
		No.	%	No.	% of Women Graduating	% of Total Graduating
George Washington U.	97	9	9.3	1	11.1	1.0
U. of Ill.	171	13	7.6	1	7.7	0.6
U. of Fla.	40	3	7.5	1	33.3	2.5
Med. College of Ala.	71	9	12.7	1	11.1	1.4
State U. of Iowa	104	5	4.8	1	20.0	1.0
Washington U.	85	4	4.7	1	25.0	1.2
U. of Vt.	42	2	4.8	1	50.0	2.4
U. of Md.	132	4	3.0	1	25.0	0.8
U. of N. C.	69	2	2.9	1	50.0	1.4
Med. College of Ga.	86	6	7.0	1	16.7	1.2
Baylor U.	67	1	1.5	1	100.0	1.5
N. Y. U.	128	14	10.9	1	7.1	0.8
Wayne State U.	63	4	6.3	1	25.0	1.6
U. of Ore.	74	3	4.0	1	33.3	1.4
Duke U.	73	3	4.1	1	33.3	1.4
Bowman Gray	53	5	9.4	2	40.0	3.8
Columbia U.	116	9	7.8	1	11.1	0.9
U. of Puerto Rico	45	6	13.3	1	16.7	2.2
U. of Tenn.	40	1	2.5	1	100.0	2.5
U. of Calif.	79	7	8.9	2	28.6	2.5
Chicago Med. School	66	1	1.5	1	100.0	1.5
Totals	1701	111	6.5	23	20.7	1.4

FIRST PLACE

The only woman in her class, MARY STRIBLING BOULDIN, M.D., graduated in first place from the Medical School of the University of Tennessee, Memphis, in September, 1959. The class consisted of 40 students.

Dr. Bouldin took her first two years of undergraduate study at Stephens College, Columbia, Mo. She then transferred to the University of North Carolina, at Chapel Hill, where she was granted a B.A. degree in 1952. She did not enter medical school immediately, but engaged in further nonmedical study at

the Northwest Mississippi Junior and Delta State Teachers colleges, in Senatoba and Cleveland, Miss., respectively.

Dr. Bouldin served an internship at John Gaston Hospital in Memphis and is still associated with that institution.

ANN M. LAWRENCE, M.D., graduated in first place in a class of 79 from the University of California School of Medicine, San Francisco. Dr. Lawrence was one of seven women in the class. She received her A.B. degree from Barnard College in New York City. She also spent one year at Stanford University and one year at the University of California at Berkeley.

Dr. Lawrence was the president of the medical student body in her senior year. She was an outstanding student all through medical school and, in 1960, she received the Borden Undergraduate Award in Medicine for research that she carried on through her medical school career.

Associate Dean, Robert H. Crede, M.D., has said of Dr. Lawrence, "She became a mother during her senior year and this in no way hindered her academic progress. She is a woman of high intelligence combined with a warm, mature personality. It gives me great pleasure to nominate Dr. Lawrence, who was one of our outstanding students. We have great expectations of her future career."

Dr. Lawrence is interning at the University of Chicago Clinics.

JOYCE ANN MCCAUGHAN, M.D., graduated in first place from the Woman's Medical College of Pennsylvania, Philadelphia. There were 41 students in the class.

Born and brought up in Philadelphia, Dr. McCaughan took her undergraduate studies at the University of Pennsylvania, in the same city. There she was elected to Phi Beta Kappa and to Pi Delta Phi, the French honor society, and received awards for major honors and distinctions in four years. She graduated with a B.A. degree in 1955.

As a medical student, Dr. McCaughan held research fellowships and was a member of Alpha Omega Alpha.

Dr. McCaughan, now interning at the Methodist Episcopal Hospital, Philadelphia, is the wife of Dr. James Steward McCaughan, Jr., a resident in surgery at the Hospital of the University of Pennsylvania.

FAY KNICKERBOCKER MYERS, M.D., who has known since junior high school that her ambition was to become a doctor, stood first in her class at graduation from The Bowman Gray School of Medicine of Wake Forest College, Winston-Salem, N.C. There were 53 students in the class, of whom 5 were women.

After completing her secondary education in her home town of Gainesville, Ga., Dr. Myers entered Duke University, Durham, N.C., as a premedical student. There she was a member of the Tri Delta Social Sorority,

which she served as president. Then, having studied physical therapy for one year at Northwestern University, Chicago, she married a student at Bowman Gray and worked for some time as a physical therapist and biochemistry research assistant.

During her years at Bowman Gray, Dr. Myers served as president of the History of Medicine Society and was a student representative at the Southern Medical Association

Convention of 1959. An externship and employment as a physical therapist occupied her during her two free quarters.

Dr. Myers is now taking an internship in internal medicine at the Ochsner Foundation Hospital in New Orleans. She has not yet decided whether her specialty will be neurology or neurosurgery but feels that, whichever it is, she is most interested in teaching. Her husband is serving a fellowship in cardiology at Tulane University.

HELEN RODRIGUEZ DE CURET, M.D., mother of four small children, graduated in first place from the University of Puerto Rico School of Medicine, San Juan. In her class there were 45 students; 6 were women.

Dr. Rodriguez was born in New York City of Puerto Rican parents. After graduating from high school there in 1947, she studied for one year at the University of Puerto Rico, then left school to get married. Six years later, with a husband and three children, she returned to her undergraduate studies. During her premedical course of work Dr. Rodriguez found time to write for "The Campus Reporter," belong to the Chemistry Club, and serve as treasurer of the Social Studies Circle.

The variety of her interests and the seemingly inexhaustible nature of her energy are more than matched by her outstanding ability, as indicated by the honors she has received in medical school: awards in honor of Doctor Manuel Diaz Garcia (for anatomy and surgery) and Doctora Josefina Villafane de Martinez Alvarez; Borden Public Health and Pfizer Corporation Pediatrics prizes, and academic awards from Abbott, C. V. Mosby, and the Puerto Rico Medical Association.

Husband and wife studied medicine together, and their internship, in view of family responsibilities, is "the maddest job we have tackled so far," according to Mrs. Rodriguez. The couple are at the University District Hospital in Rio Piedras.

RANKING first in a class of 116 students, ORA MENDELSOHN ROSEN, M.D., graduated from the College of Physicians and Surgeons of Columbia University, New York City. There were nine women in the class.

Secondary, premedical, and medical studies were pursued by Dr. Rosen in New York City. As a high school student there, she majored in music, but at Barnard College science

became her primary interest, and her major field of study was zoology. During both undergraduate and medical school years, Dr. Rosen was active in student organizations.

She is interning in medicine at the Bronx Municipal Hospital in New York City. Associate Dean Aura E. Severinghaus of the College says of Dr. Rosen: "She has been an outstanding student . . . and will unquestionably make a contribution to the profession of medicine both in teaching and research as well as practice."

HONORABLE MENTION

BETTE PONACK ALBERT, M.D., graduated in ninth place in a class of 97 students from the George Washington School of Medicine, Washington, D.C. She was one of 9 women in the class.

Dr. Albert, whose home has always been Washington, did her undergraduate work at Tufts University, Boston. She graduated *cum laude* and received a B.S. degree.

In the summer before her last year of medical school, Miss Ponack married Bernard Albert, a fellow student who is now a second-year resident in medicine at George Washington University Hospital. Mrs. Albert's own internship was deferred due to pregnancy.

Raising tropical fish, playing the piano, and cooking are her hobbies.

Distinguished by an unusual capacity for leadership as well as scholarship, JEAN LESTER BENNETT, M.D., graduated in the top 10 per cent of her class from the University of Florida College of Medicine, Gainesville. She was one of 3 women in a class of 40 students.

At high school in Baileysville, W. Va., Dr. Bennett was president of the Honor Society and the Student Council and valedictorian of her class. At Concord College, Athens, W. Va., she continued to lead in extracurricular activities without neglecting her studies: In Alpha Sigma Alpha Sorority, the premedical association, the Panhellenic Council, and the Cardinal Key Honorary Society she was member and president. At graduation she received a B.S. degree *magna cum laude* and the school's Chemistry Award.

Research in neurophysiology, done by Dr. Bennett in medical school, was described in "The Effect of Adrenalectomy and Cortisone on Peripheral Nerve Function," which was published in the *American Journal of Physiology*. A member of the first class to enter the University's college of Medicine, Dr. Bennett is also a charter member of Florida Beta Chapter of Alpha Omega Alpha.

Her outside interests include music, piano, tennis, skiing, and swimming. During the summers she has worked as a counselor in a children's camp in Michigan.

In June, 1959, she married Fenton J. Bennett, Jr., a fellow medical student. She is now interning in pediatrics at the University Teaching Hospital in Gainesville.

FERN E. COTTRELL, M.D., a scholarship student from freshman year to graduation, held fifth place in the graduating class of the University of Illinois College of Medicine. There were 13 women in the class of 171 students.

Dr. Cottrell attended Aurora College in Illinois, graduating with a B.S. degree in 1955. During her school years she has maintained a special interest in sports—tennis, swimming, and skating—as well as dramatics.

As a medical student Dr. Cottrell was elected to Alpha Epsilon Iota and Alpha Omega Alpha, serving as secretary of the latter during

her senior year. For four years she was granted the Mooney scholarship.

"Alert, inquisitive, hard-working, and likeable," are characteristics ascribed to Dr. Cottrell by the faculty. She is interning at Presbyterian-St. Luke's Hospital in Chicago.

JOYCE HELEN DANIELSKI, M.D., was in the top 10 per cent of a class of 63 students graduating from Wayne State University's College of Medicine, Detroit. There were four women in the class.

A native of Detroit, Dr. Danielski graduated from Cass Technical High School in that city and went on to Wayne's College of Pharmacy. There she belonged to Lambda Kappa Sigma Sorority and Rho Chi Honor Society. In 1956 she was granted a B.A. degree.

During her last two years as a medical student, Dr. Danielski held research fellowships in biochemistry; in her final year she was elected to Alpha Omega Alpha.

Skiing, tennis, and the piano occupy her spare time.

After her internship at Santa Monica Hospital in California, Dr. Danielski plans to take a residency in child psychiatry or pediatrics.

MARY ELAINE EYSTER, M.D., one of 3 women in her class, ranked third among 73 students graduating from Duke University School of Medicine, Durham, N.C. Dr. Eyster's premedical study was also taken at Duke; she received a B.A. degree in 1956.

Dr. Wilbert C. Davison, Dean of the School of Medicine, says of Dr. Eyster: "Not only has she been a superior student scholastically but she also has an outstanding personality and character. All of us here think very highly of her and feel sure that she will be a most successful physician."

Now an intern in medicine at New York Hospital, New York City, Dr. Eyster is undecided as to future plans, but expresses special interest in academic medicine and the field of endocrinology.

Indoor and outdoor forms of recreation—golf, bridge, water sports, and dancing—occupy her free time.

H. BEE GATLING, M.D., graduated in second place from the Bowman Gray School of Medicine of Wake Forest College, Winston-Salem, N.C. There were 5 women in a class of 53 students.

After completing secondary education in her home town of Charlotte, N.C., Dr. Gatling entered the Woman's College of the University of North Carolina; there she majored in chemistry and was active in the Chemistry Club, which she served as president, and in a modern dance group.

Having received her B.A. degree in 1952, Dr. Gatling went north to New Jersey to work as an analytical chemist and public relations officer.

She became a medical student at Bowman Gray in 1956. Secretary of her sophomore

class, she later earned the Pediatric Merit award and membership in Alpha Omega Alpha.

During her free quarter in 1959, Dr. Gatling worked as a research associate in the Department of Obstetrics and Gynecology. The study, sponsored by The National Foundation, was made to determine the number and nature of birth defects following maternal rubella. Dr. Gatling continued working on the study this summer and began internship at Denver General Hospital in the fall.

DORIS GOODMAN, M.D., graduated fourth in a class of 41 students from Woman's Medical College of Pennsylvania, Philadelphia.

Dr. Goodman's home is Ohio; she grew up in Cleveland and attended Ohio State University in Columbus, graduating with a B.S. degree. At Woman's Medical College Dr. Goodman was elected to Alpha Omega Alpha.

In her spare time she enjoys doing enameling work and performing and listening to music.

Dr. Goodman is now serving an internship at the University of Chicago Clinics Hospital.

JEANNE JAGGARD, M.D., whose introduction to medicine consisted of watching her medical-missionary father at work in the Belgian Congo, graduated in sixth place from the State University of Iowa College of Medicine, Iowa City. There were 5 women and 99 men in her class.

Dr. Jaggard's early childhood in Africa was spent in the company of such pets as a monkey, a baby leopard, and baby alligators, and

one of her most vivid memories is of the baby elephant her father tried for two days (unsuccessfully) to catch and add to the family's menagerie. Not surprisingly, her major nonmedical interests are archeology and art history, and her private museum includes artifacts from Africa, Japan, and Hong Kong.

At the age of 7 years she came to the United States and has remained here since. She completed nurses' training in Nashville, Tenn., and worked as a clinical nursing instructor in obstetrics (at the same time taking courses at night) before completing her undergraduate studies at Iowa.

At present she is interning at the State University of Iowa Hospitals, where her husband is a resident in urology.

JANICE KANE, M.D., the first woman ever elected to membership in Phi Lambda Kappa, a national medical fraternity, graduated in the top 10 per cent of her class from The Chicago Medical School. The only woman in a class of 66 students, Dr. Kane ranked sixth.

An art student for several years at the Pratt Institute in New York City, Dr. Kane took her undergraduate studies at Adelphi College,

Garden City, N.Y., where she was a member of the Premedical Club and Officer of the Biology Club.

At medical school she served as class secretary for four consecutive years and, in her senior year, served Phi Lambda Kappa in the same capacity. She was also a member of Alpha Epsilon Delta, an honor society, and Iota Alpha Pi Sorority.

Dr. Kane, who says she "always wanted to be a doctor," is interning at Bronx Municipal Hospital Center in New York City. She plans to specialize in surgery.

CAROLYN OLSSON KERR, M.D., ranked fifth in a class of 79 students graduating from the University of California School of Medicine, San Francisco. There were 7 women in the class.

Before becoming a medical student, Dr. Kerr attended the University's School of Nursing for a year. She also studied at the University of California at Berkeley for three years.

Dr. Kerr is not interning at present.

SUZANNE BUCKNER KNOEBEL, M.D., one of 4 women in a class of 132 students, graduated in second place from the Indiana University School of Medicine, Ft. Wayne.

Dr. Knoebel graduated with a B.A. degree from Goucher College, Baltimore, in 1948. She is now an intern at the Indiana University Medical Center in Indianapolis. Her future plans are not yet definite.

BEATRICE CAMPBELL LAMPKIN, M.D., graduated in second place from The Medical College of Alabama, Tuscaloosa. In her class there were 71 students, 9 of whom were women.

Dr. Lampkin completed her secondary, premedical, and medical studies in Tuscaloosa. As an undergraduate at the University of Alabama, Dr. Lampkin's interests covered a wide

range from music—she plays the clarinet—and swimming to government and straight scholarship: Phi Beta Kappa, Alpha Epsilon Delta, Million Dollar Band, Sigma Phi Sigma, Student Court, Alpha Lambda Delta, and Mortar Board are among the organizations of which she was a member. Dr. Lampkin's status on campus is indicated by the inclusion of her name in the 1954 edition of *Who's Who in American Colleges and Universities*. In 1956 she received a B.S. degree with a major in chemistry and a minor in biology.

Continuing the pace at medical school, she joined the yearbook staff, merited election to Alpha Omega Alpha, and received the Stuart Graves Pathology award.

Currently interning at the Medical College of Virginia in Richmond, Dr. Lampkin's immediate plans include a residency in internal medicine.

LUCIENNE THERESA LANSON, M.D., already an experienced physical therapist, ranked third in the graduating class of Woman's Medical College of Pennsylvania, Philadelphia. There were 41 students in the class.

A native of San Francisco, Dr. Lanson completed high school there and entered the Uni-

versity of California at Berkeley. She graduated with a B.A. degree and was employed for some time as a physical therapist for the U.S. Army.

At WMC her academic standing qualified her for membership in Alpha Omega Alpha.

Fishing and tennis-playing are her favorite week-end activities.

Dr. Lanson is now serving as an intern at St. Joseph's Hospital in Denver.

AUDREY FERN POSEY, M.D., author of two published articles, graduated in the top 10 per cent of her class from Baylor University College of Medicine, Houston. She was the only woman in a class of 67 students.

After receiving a B.S. degree from the University of Oklahoma, Dr. Posey became a student at Oklahoma City University. She did research in biochemistry for one year before entering medical school and has continued in this work during summer vacations.

She has contributed articles to the *American Journal of Physiology* and the proceedings of the Oklahoma Conference on Radioisotopes in Agriculture.

Her nonmedical interests—combining art, intellect, and craftsmanship—are copper enameling, piano-playing, reading, home-designing, and interior decorating.

Dr. Posey stayed in Houston for her internship, which she is taking at Hermann Hospital.

MARGARET BERON SCALES, M.D., one of two women in a class of 69 students, graduated in seventh place from the University of North Carolina School of Medicine, Chapel Hill.

Receiving academic titles is a familiar business for Dr. Scales, who has already earned a B.A. degree (*cum laude*) at Barnard College and M.A. and Ph.D. degrees at Columbia University.

In private life Dr. Scales is Mrs. A. Stark Wolkoff. Her husband is an assistant professor of obstetrics and gynecology at the University of North Carolina.

Her domestic interests include cats and gardening.

Dr. Scales is interning at Chapel Hill's North Carolina Memorial Hospital.

ROSEMARY W. STEVENS, M.D., once a string bass viol player for the Portland Symphony Orchestra, graduated in fourth place from the University of Oregon Medical School, Portland. She was one of 3 women in a class of 74 students.

Dr. Stevens attended Lewis and Clark College in Portland for premedical study, graduating with a B.A. degree in 1957. As a medical student she was active in AMWA University of Oregon Junior Branch and the Oregon Chapter of Alpha Omega Alpha. During her senior year she served the first organization as president and the second as secretary-treasurer.

Although she still enjoys playing string bass and piano, Dr. Stevens finds little time for those or her other interests, tennis and horseback riding. She is an intern at the University of Oregon Medical School Hospital and Clinics.

Sara A. Stoesser, M.D., whose avocation is painting in oils, graduated in second place from the College of Medicine of the University of Vermont, Burlington. She was one of 2 women in a class of 42 students.

Dr. Stoesser attended Vassar College in Poughkeepsie, N.Y., where she was able to paint and ski as well as engage in more formal work.

During her last year at medical school Dr. Stoesser was elected to Alpha Omega Alpha. Of her medical degree she says: "This June marked the completion and realization of a long-cherished dream."

A summer of European travel was followed by the commencement of internship at St. Luke's Hospital, New York City. Dr. Stoesser's future plans are not definite.

Carolyn White Terry, M.D., graduated in the top 10 per cent of her class from the Washington University School of Medicine, St. Louis, Mo. She was one of 4 women in a class of 85 students.

Dr. Terry completed her secondary education in Louisville, Ky., and her premedical studies at Washington University, receiving a B.A. degree in 1956. She is now interning at Syracuse Medical Center Hospital, New York.

Rose Lou Tse, M.D., a native of Shanghai, China, graduated second in her class from the Woman's Medical College of Pennsylvania, Philadelphia. There were 41 students in the class.

After completing high school in Shanghai, Dr. Tse earned the first of various academic degrees—a B.S.—at St. John's University in China. In the United States she went on to earn M.A. and Ph.D. degrees from Mt. Holyoke College, South Hadley, Mass., and Yale University, New Haven, Conn., respectively.

An active member of Alpha Omega Alpha, Dr. Tse has held research fellowships throughout her years of medical school.

Baseball is one of her favorite sports, others being swimming and basketball.

Dr. Tse is married to Mr. Harold F. H. Tse, a chemical engineer. The couple now lives in Philadelphia, where Dr. Tse is an intern at the Philadelphia General Hospital.

MARLYS WITTE, M.D., one of 14 women in a class of 128 students, graduated in the top 10 per cent from the New York University School of Medicine, New York City.

Her undergraduate studies were taken at Barnard College, New York City. A Phi Beta Kappa member, Dr. Witte graduated *summa cum laude* with a B.A. degree. At medical school she became especially interested in metabolic diseases and radioactive isotopes. Dean S. Bernard Wortis, M.D., states: "Mrs. Witte has shown a keen interest in clinical investigation; she has demonstrated unusual ability in applying basic scientific concepts to clinical problems."

Caricature, portraiture, and the playing of four instruments (piano, harp, violin, and bass viol) are among the nonmedical arts which Dr. Witte prefers. She also enjoys chess.

Dr. Witte is now interning at North Carolina Memorial Hospital in Chapel Hill. Her plans for the future are not yet definite.

BETTY BEASLEY WRAY, M.D., was eighth in a class of 86 students graduating from the Medical College of Georgia, Augusta. There were 6 women in the class.

Since high school days in Dixie, Ga., when she was valedictorian of her class, Dr. Wray has shown outstanding academic ability. At Mercer University, in Macon, Ga., she continued to earn scholastic honors and graduated *magna cum laude* with a B.A. degree in 1956.

Dr. Wray and her husband are now located in Augusta, where she is an intern at Talmadge Memorial Hospital.

Left to right: Lucia Gomez, M.D., Rosalie Voigt Johnson, M.D., and Marta Celina Steinberg, M.D. (See opposite page for biographies.)

LUCIA GOMEZ, M.D., ROSALIE VOIGT JOHNSON, M.D., and MARTA CELINA STEINBERG, M.D., all graduated in the top 10 per cent of their class at Emory University School of Medicine, Atlanta, Ga. They were the only women in the class of 71 students. All three were members of Alpha Omega Alpha and Dr. Johnson served the chapter as treasurer in her senior year.

Dr. Gomez, who ranked fifth in her class, is interning at Georgetown University Hospital in Washington, D.C. She plans to return to her native Colombia after her training is completed.

Dr. Johnson married a Methodist minister, Morgan Johnson, at the end of her freshman year. The couple plans to do foreign mission work after Dr. Johnson completes her internship program at Grady Memorial Hospital in Atlanta. Their first child, a girl, was born a few weeks after she received her M.D. degree.

Dr. Steinberg came to Emory University to earn her Ph.D. degree in anatomy. She married a fellow student, Joel Steinberg, in 1956 and decided to study medicine. Dr. Joel is a resident in medicine and Dr. Marta is a Fellow in medicine at Emory University. They have two children.

Information on these physicians was received too late to be included in the table on page 1179.

Fellowship Award

The Women's Medical Association of the City of New York offers the Mary Putnam Jacobi Fellowship to a graduate woman physician, either American or foreign. The Fellowship of $1,000 will begin Oct. 1, 1961, for a period of one year. At the discretion of the Committee, an award of $2,000 may be given biennially. The recipient of the Fellowship will be expected to make a report at the end of the fourth month, after which the balance will be awarded, subject to the approval of the Committee. The Fellowship is given for medical research, clinical investigation, or postgraduate study in a special field of medicine. The recipient is expected to devote full time to the Fellowship, but exception may be made under special circumstances.

Applications may be obtained from the Chairman of the Committee, Ada Chree Reid, M.D., 118 Riverside Drive, New York City 24, and must be returned before March 1, 1961. Successful candidates will be notified not later than May 1, 1961.

Opportunities for Women in Medicine

AWARDS

Research. BRANCH TWO, CHICAGO, of the American Medical Women's Association has announced a Research Contest offering two cash prizes, first prize $100, second prize $50, to men and women residents, interns, and senior medical students in Chicago and surrounding areas. An abstract of 200 words or less must be submitted by Feb. 1, 1961. Winners will be selected by a panel of specialists. Winning papers will be presented April 12, 1961, at a meeting in honor of the ninety-fifth anniversary of the Mary Thompson Hospital in Chicago. For further details please write Bertha Isaacs, M.D., 670 N. Michigan Ave., Chicago.

COURSES

EENT. The Ophthalmological Society of the Philippines and the Philippine Ophthalmological and Otolaryngological Society have announced the first Far East graduate course covering basic and clinical aspects of the subjects and including didactic lectures, panel discussions, seminars, and clinical demonstrations. The course is open to licensed physicians of any nationality who are invited preferably as participants through their respective medical societies. Information regarding clothes, climate, and currency, can be obtained through local embassies, consulates, and travel bureaus. Other information regarding the course can be obtained by writing to Dr. Edgardo T. Caparas, Graduate Course in Ophthalmology, The Physicians' Club, Dewey Boulevard, Manila, the Philippines.

ESSAY PRIZE

Dermatology. A prize of $500 will be awarded by the Chicago Dermatological Society for the best unpublished essay on a phase of dermatology or on basic research related to dermatologic problems. Second and third prizes of $300 and $200, respectively, will also be awarded. The Society's purpose is "to stimulate young physicians and other young scientists in research study on the structure, functions and diseases of the skin." Members and accredited guests of the Society and scientists within the Middle West who are sponsored by a member may enter the contest. Three copies of the essay, together with tables and figures, should be submitted before Feb. 15, 1961, to Dr. Frederick J. Szymanski, Secretary, Chicago Dermatological Society, 55 E. Washington St., Chicago 2. Prize winners will be announced in March, 1961.

FELLOWSHIPS

Research. The American College of Physicians' Committee on Fellowships and Scholarships recently approved a change in the College Research Fellowships, and is now awarding them for a three year term. Applications for such fellowships shall be made by the Chairman of the Department of Medicine in any institution in the United States and Canada with a recognized program of medical education and research. The Chairman must submit a careful and complete evaluation of the candidate, which shall be implemented by a letter from the College Governor of the State or Province concerned. A Chairman may recommend only one person for fellowship during the calendar year. The chairman must be prepared to provide the fellow with adequate facilities during the course of his fellowship or to help him to obtain such facilities in an institution in which research is to be carried out. Research grants will begin on July 1 of any year. Two fellowships will be awarded in 1961, two in 1962, and two in 1963. Thereafter, two new fellowships will be added each succeeding year, on the completion of each pair of three year fellowships. The stipend for the first year should be $6500, for the second, $7500, and for the third year, $8500. Further information can be obtained from Edward C. Rosenow, Jr., F.A.C.P., Executive Director, American College of Physicians, 4200 Pine St., Philadelphia 4.

MEETINGS

Allergy. The American Academy of Allergy will meet Feb. 6-8 at the Statler-Hilton Hotel in Washington, D.C. For information contact Mr. James O. Kelley, 756 N. Milwaukee St., Milwaukee 2, Wis.

Anesthesiology. The International Anesthesia Research Society will meet in Houston, Texas, April 9-13. For information write to Dr. A. William Friend, 227 Wade Park Manor, Cleveland 6.

Forensic Science. The American Academy of Forensic Sciences will hold its meeting at the Statler Hotel in Detroit Feb. 23-25. For information contact Dr. W.J.R. Camp, 1853 W. Polk St., Chicago 12.

Medical Education. The Congress on Medical Education and Licensure will hold its meeting at the Palmer House in Chicago Feb. 4-7. Contact Mrs. Ann Tipner, AMA, 535 N. Dearborn St., Chicago 10, for information.

Medicine. The British Colonial Hotel in Nassau will be the site of the Bahamas Medical Conference to be held April 3-15. For information write Mr. Irvin M. Wechsler, P.O. Box 1454, Nassau, Bahamas.

Occupational Medicine. The American Academy of Occupational Medicine will meet Feb. 8-10 at the Statler Hotel in Detroit. Contact Dr. Paul J. Whitaker, Allis-Chalmers Mfg. Co., P.O. Box 512, Milwaukee 1, for information.

Surgery. The Society of University Surgeons will meet at the University of Kansas Medical School, Kansas City, Feb. 9-11. For information write Dr. Ben Eiseman, 4200 E. Ninth Ave., Denver 20.

News of Our Advertisers

EYE CHART

A unique eye chart designed to test the vision of children 3 years of age and over has been sent to pediatricians and ophthalmologists by Schering Corporation. Featuring easily recognizable objects rather than conventional lettering, the chart enables the pediatrician to differentiate between normal and diminished visual acuity at an age when treatment by an eye specialist can be accomplished most effectively. The test can be performed easily and quickly, even by an office assistant, after a brief period of instruction. This method of screening has been employed for many years in eye centers throughout the country.

Pediatricians received a complete kit containing the chart, a convex plastic lens, and screening test instructions. The chart is 11 in. wide and 16 in. high.

NEW DEVICE FOR RESCUE BREATHING

A simple, effective, and economical device has been introduced to permit "mouth-to-mouth" rescue breathing by untrained persons without personal contact with the victim. The "Venti-Breather" oral resuscitator's flexible face mask separates the rescuer from the victim in a sanitary manner and fits both adults and children. The rescuer breathes through a special tube to inflate the victim's lungs; as the victim's lungs deflate, a unique one-way valve directs his breath away from the rescuer's mouth and face. Nothing is inserted in the throat of the victim to cause gagging or injury.

Rescue breathing supplies ample oxygen in an emergency to save a life and to prevent brain damage until the victim is revived or until specialized medical assistance arrives. Inhaled air contains about 21 per cent oxygen, but one's exhaled breath still has about 16 per cent life-giving oxygen at just the right temperature, pressure, humidity, volume, rhythm, and rate. For further information about this device. write Venti-Breather Products, Inc., 725 15th St., N.W., Washington 5, D.C.

DIAGNOSTIC AID FOR OCCULT BLOOD

Hemoccult, a new diagnostic aid for detection of occult blood in feces and urine, is a simple, one minute diagnostic test that the physician can perform in his office or on house calls. Previously, a physician desiring to determine the presence of occult blood for diagnostic purposes found it necessary to employ one complicated test for blood in feces and a different test for blood in urine. Here, in available, compact, portable form, all the necessary materials are at hand. The test is reported to be more reliable than any other commercially available test for detection of occult blood.

Hemoccult, introduced by Schieffelin & Co.'s Pharmaceutical Laboratories Division, features a special, pure electrophoresis filter paper impregnated with guaiac gum that, in the past, has been used primarily in relatively unstable form in alcoholic solution as an indicator. The guaiac on the paper remains stable indefinitely when protected from direct sunlight, ultraviolet light, or strong heat. It is provided as a strip 100 in. long in a convenient plastic dispenser. A "developer solution," originated especially for this test, is provided to render rapid definite results.

Each Hemoccult test kit will perform 100 tests.

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Journal of the American Medical Women's Association

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1. Marx, F.J., in *Trifluoperazine: Further Clinical and Laboratory Studies*, Philadelphia, Lea & Febiger, 1959 p. 89
2. Winkelman, N.W., Jr.: *ibid.*, p. 78.

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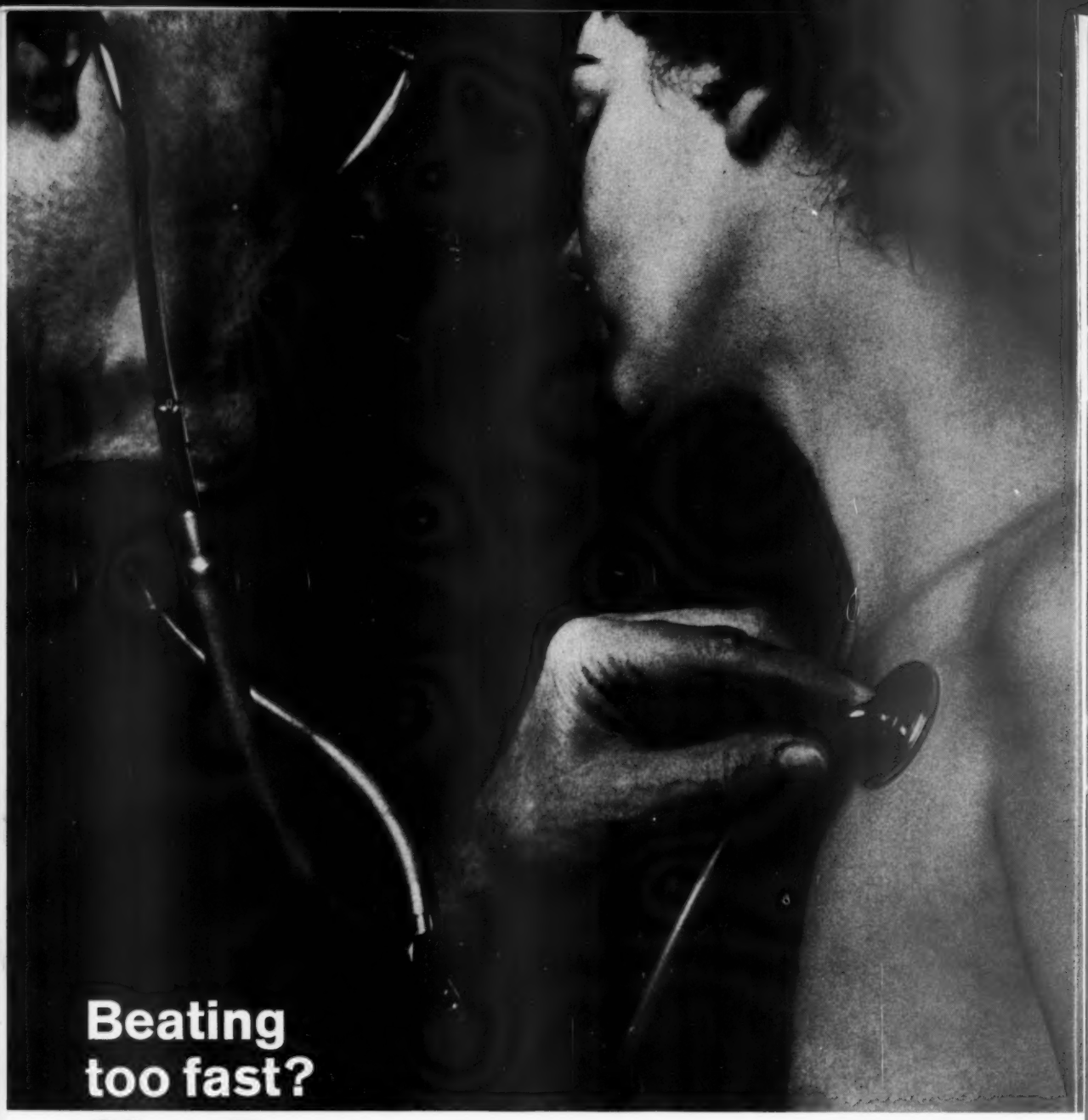

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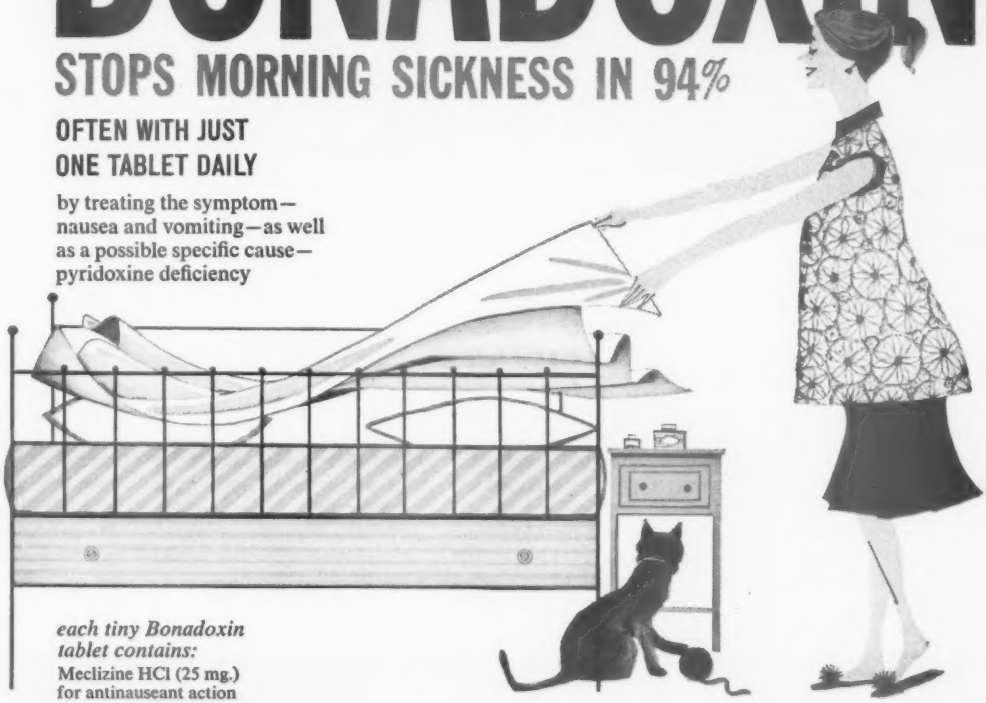

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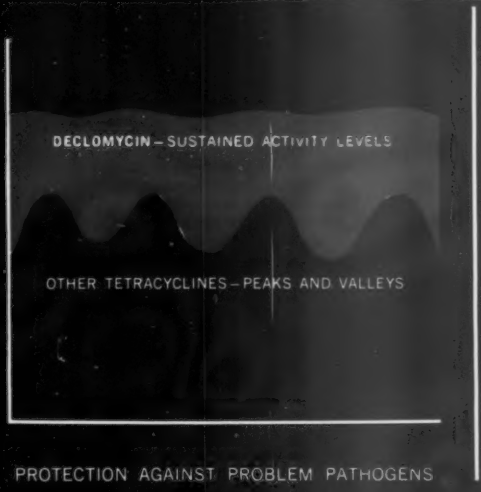

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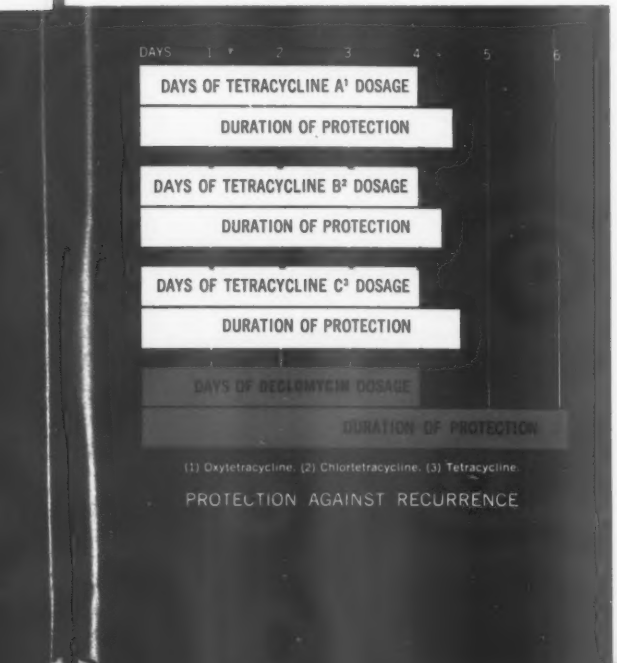
DAYS 1 2 3 4 5 6
DAYS OF TETRACYCLINE A¹ DOSAGE
DURATION OF PROTECTION
DAYS OF TETRACYCLINE B² DOSAGE
DURATION OF PROTECTION
DAYS OF TETRACYCLINE C³ DOSAGE
DURATION OF PROTECTION
DAYS OF DECLOMYCIN DOSAGE
DURATION OF PROTECTION

(1) Oxytetracycline. (2) Chlortetracycline. (3) Tetracycline.

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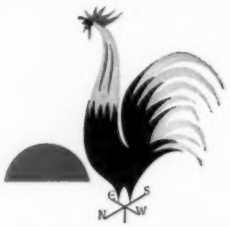

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SIDE EFFECTS: *Not* a phenothiazine, the side effects reported in association with BONINE have been mild and/or transient and consist of occasional drowsiness, dryness of the mouth, and blurred vision. Drowsiness is seen less frequently with BONINE in therapeutic dosages than with most other effective antiemetics.

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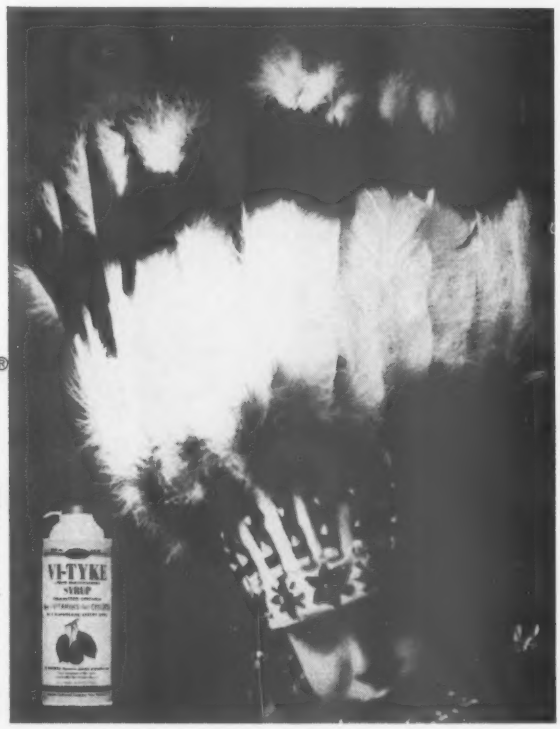

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—Natenshon, A. L.: Dis. Nerv. System *17*:392 (Dec.) 1956.

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—Landman, M. E., Preisig, R., and Perlman, M.: J. M. Soc. New Jersey *55*:55 (Feb.) 1958.

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*Rock, J.; García, C.-R., & Pincus, G.: *Am. J. Obst. & Gynec.* **79**:758, 1960. 41440

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See over for therapy in difficult patients ►

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In clinical studies of over 3,600 patients, the number of reactions, none serious, was less than 2 per cent.[1-6] " 'Thiosulfil' was remarkably well tolerated, there being no discontinuation of treatment due to untoward effects, and very few mild reactions were noted."[2] "The drug can be taken over a long period of time with practically no untoward side reactions."[3] "Clinical trial appears to indicate that the drug can be tolerated where other sulfa drugs cannot and that it is effective where some others are not."[4] Out of 3,057 cases . . . 47 patients (1.6%) showed g.i. disturbances and 33 patients (1.1%) allergic reactions.[1] NO REPORTS OF: hemorrhagic dyscrasias, hematuria, anuria, agranulocytosis.

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TIME PERIOD	DOSE
First two weeks	3 Gm./day[1]
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Suggested Range of Dosage: 1 or 2 tablets three or four times daily. Note: The usual precautions exercised with sulfonamides should be observed.

Supplied: No. 786: Each tablet contains 0.5 Gm. sulfamethizole; in bottles of 100 and 1,000 scored tablets.

References—1. Bourque, J-P., and Gauthier, G-E.: Seven years' experience with sulfamethizole, to be published. 2. Bourque, J-P., and Joyal, J.: Canad. M.A.J. 68:337 (Apr.) 1953. 3. Barnes, R. W.: J. Urol. 71:655 (May) 1954. 4. Goodhope, C. D.: J. Urol. 72:552 (Sept.) 1954. 5. Boger, W. P.: The Antibacterial Sulfonamides: Comparative Studies, Scientific Exhibit Section, American Academy of General Practice Eleventh Annual Scientific Assembly, Apr. 6-9, 1959, San Francisco, California. 6. Cottrell, T. L. C., Rolnick, D., and Lloyd, F. A.: Rocky Mountain M. J. 56:66 (Mar.) 1959. 7. Hughes, J., Coppridge, W. M., and Roberts, L. C.: North Carolina M. J. 17:320 (July) 1956.

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*From a clinical investigator's report to Merck Sharp & Dohme.

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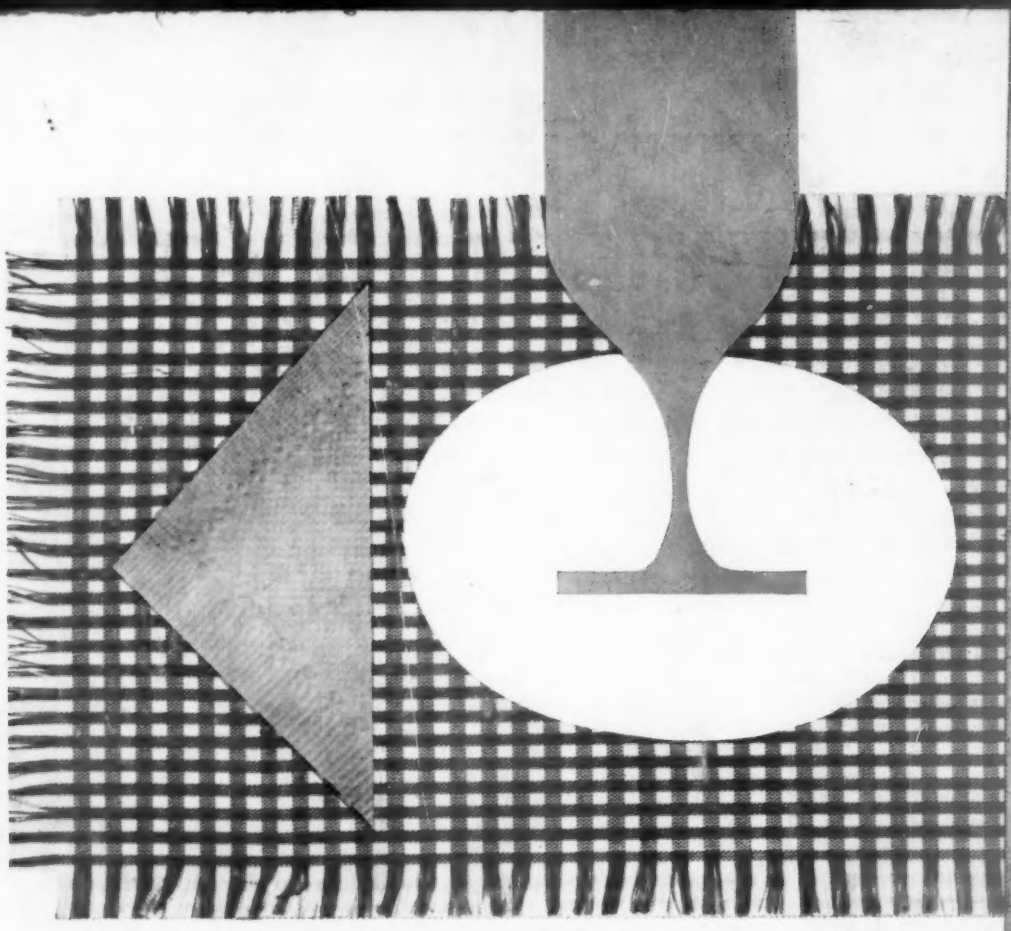

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